

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

Number 4751

Konkoly Observatory
Budapest

16 August 1999

HU ISSN 0374 – 0676

PHOTOELECTRIC MINIMA OF SOME ECLIPSING SYSTEMS

T. PRIBULLA, D. CHOCHOL, Š. PARIMUCHA

Astronomical Institute of the Slovak Academy of Sciences, SK 059 60 Tatranská Lomnica, Slovakia

We present 61 new minima times of 10 RS CVn and W UMa systems taken from August 1997 to July 1999 as a part of the program of the full light-curve coverages.

The *U*, *B*, *V* and *R* photoelectric observations were taken at the Skalnaté Pleso (SP) and Stará Lesná (SL) observatories of the Astronomical Institute of the Slovak Academy of Sciences. In both cases the 0.6-m Cassegrain telescope equipped with a single-channel pulse-counting photoelectric photometer was used. For all observations a 10 second integration was used. Data reduction, the atmospheric extinction correction and transformation to the standard system were carried out in the usual way.

We have calculated the times of minima separately for all filters using the Kwee and Van Woerden's method, parabola fit, sliding integration method, tracing paper and "center of mass" method which were described in detail by Ghedini (1982). The computer codes were kindly provided by Dr. R. Komžík (1999). The average times of the primary (I) and secondary (II) minima and their probable errors found by these methods are given in Table 1.

Table 1: Times of minima of observed systems

System	HJD 2400000+	σ	Min. type	Filter	Obs.
RT And	50682.4317	0.0002	II	B	SP
	50682.4319	0.0003	II	V	SP
	50682.4321	0.0002	II	R	SP
	50708.53357	0.00010	I	U	SL
	50708.53319	0.00006	I	B	SL
	50708.53328	0.00009	I	V	SL
	50709.4757	0.0016	II	U	SL
	50709.47792	0.00012	II	B	SL
	50709.4781	0.0002	II	V	SL
	51041.5495	0.0024	II	B	SP
	51041.5499	0.0003	II	V	SP
	51041.5494	0.0002	II	R	SP
	51066.3935	0.0001	I	U	SL
	51066.3943	0.0002	I	B	SL
	51066.3944	0.0002	I	V	SL
	51142.49384	0.00009	I	B	SP
	51142.49359	0.00003	I	V	SP
	51142.49379	0.00004	I	R	SP
	51150.35510	0.00012	II	V	SP
	51150.35522	0.00009	II	R	SP
51160.4160	0.0001	II	B	SL	
51160.4164	0.0004	II	V	SL	

Table 1 (cont.)

System	HJD 2400000+	σ	Min. type	Filter	Obs.	
44i Boo	50902.3649	0.0004	I	U	SL	
	50902.3664	0.0007	I	B	SL	
	50902.3665	0.0002	I	V	SL	
	50902.4994	0.0010	II	U	SL	
	50902.5037	0.0002	II	B	SL	
	50902.5029	0.0007	II	V	SL	
	50926.3413	0.0005	II	U	SP	
	50926.3407	0.0002	II	B	SP	
	50926.3402	0.0005	II	V	SP	
	50926.3420	0.0003	II	R	SP	
	50937.4540	0.0001	I	U	SL	
	50937.4548	0.0001	I	B	SL	
	50937.4569	0.0003	I	V	SL	
	50939.4627	0.0007	II	U	SL	
	50939.4626	0.0005	II	B	SL	
	50939.4628	0.0007	II	V	SL	
	50945.3570	0.0002	II	V	SL	
	50945.49039	0.00005	I	V	SL	
	51017.3936	0.0007	II	U	SL	
	51017.3954	0.0004	II	B	SL	
	51017.3969	0.0005	II	V	SL	
	51256.4271	0.0001	I	B	SP	
	51256.4295	0.0002	I	V	SP	
	51256.4286	0.0002	I	R	SP	
	51256.5635	0.0003	II	B	SP	
	51256.5626	0.0003	II	V	SP	
	51256.5627	0.0002	II	R	SP	
	SV Cam	50839.51107	0.00011	I	U	SL
		50839.51065	0.00017	I	B	SL
		50839.51054	0.00008	I	V	SL
		50849.3004	0.0008	II	U	SL
		50849.3002	0.0003	II	B	SL
50849.2992		0.0002	II	V	SL	
50849.59314		0.00014	I	U	SL	
50849.59299		0.00006	I	B	SL	
50489.59289		0.00006	I	V	SL	
51158.2894		0.0005	II	V	SP	
51158.2919		0.0003	II	R	SP	
51160.36419		0.00006	I	B	SP	
51160.36412		0.00010	I	V	SP	
51160.36408		0.00007	I	R	SP	
51166.29450		0.00028	I	B	SP	
51166.29441		0.00014	I	V	SP	
51166.29418		0.00008	I	R	SP	
51166.5977		0.0008	II	B	SP	
51166.5939		0.0002	II	V	SP	
51166.5963		0.0008	II	R	SP	
51179.34403		0.00015	I	B	SP	
51179.34337		0.00022	I	V	SP	
51179.34303	0.00013	I	R	SP		
EG Cep	51131.3400	0.0002	I	B	SP	
	51131.3411	0.0002	I	V	SP	
	51131.3416	0.0003	I	R	SP	
VW Cep	51067.4198	0.0002	II	U	SL	
	51067.4196	0.0002	II	B	SL	

Table 1 (cont.)

System	HJD 2400000+	σ	Min. type	Filter	Obs.
VW Cep	51067.4202	0.0002	II	V	SL
	51067.5593	0.0005	I	U	SL
	51067.5597	0.0006	I	B	SL
	51067.5609	0.0001	I	V	SL
	51150.3595	0.0005	II	U	SL
	51150.35993	0.00005	II	B	SL
	51150.3609	0.0003	II	V	SL
	51151.33309	0.00009	I	U	SL
	51151.33378	0.00009	I	B	SL
	51151.33240	0.00014	I	V	SL
	51378.43746	0.00018	I	U	SL
	51378.43798	0.00016	I	B	SL
	51378.43771	0.00023	I	V	SL
WY Cnc	51150.57409	0.00018	I	U	SL
	51150.57324	0.00003	I	B	SL
	51150.57297	0.00008	I	V	SL
AW UMa	50927.4228	0.0005	II	U	SL
	50927.4226	0.0003	II	B	SL
	50927.4223	0.0003	II	V	SL
	51142.61804	0.00012	I	U	SP
	51142.61777	0.00026	I	B	SP
	51142.61698	0.00012	I	V	SP
	51142.61668	0.00008	I	R	SP
W UMa	50855.34850	0.00003	I	U	SL
	50855.34763	0.00028	I	B	SL
	50855.34804	0.00008	I	V	SL
	50863.35545	0.00007	I	U	SL
	50863.35554	0.00003	I	B	SL
	50863.35553	0.00002	I	V	SL
	50863.52428	0.00031	II	U	SL
	50863.52392	0.00009	II	B	SL
	50863.52311	0.00013	II	V	SL
	50872.36282	0.00015	I	U	SP
	50872.36285	0.00006	I	B	SP
	50872.36285	0.00013	I	V	SP
	50872.36292	0.00006	I	R	SP
	50890.38050	0.00007	I	U	SL
	50890.37998	0.00006	I	B	SL
	50890.38010	0.00001	I	V	SL
	51137.6050	0.0002	I	U	SL
	51137.6038	0.0002	I	B	SL
	51137.6045	0.0003	I	V	SL
	51150.44867	0.00003	II	B	SL
51150.44866	0.00002	II	V	SL	
XY UMa	51130.63588	0.00009	I	U	SL
	51130.63560	0.00006	I	B	SL
	51130.63569	0.00008	I	V	SL
	51141.65151	0.00004	I	B	SP
	51141.65114	0.00006	I	V	SP
	51141.65141	0.00004	I	R	SP
	51150.5089	0.0006	II	B	SP
	51150.5072	0.0010	II	V	SP
	51150.5100	0.0005	II	R	SP
	51158.41620	0.00004	I	B	SP
	51158.41647	0.00004	I	V	SP

Table 1 (cont.)

System	HJD 2400000+	σ	Min. type	Filter	Obs.	
XY UMa	51158.41654	0.00005	I	R	SP	
	51158.6505	0.0012	II	B	SP	
	51158.6523	0.0010	II	V	SP	
	51158.6546	0.0002	II	R	SP	
	51177.57551	0.00003	I	B	SP	
	51177.57570	0.00008	I	V	SP	
	51177.57579	0.00008	I	R	SP	
	51183.32611	0.00015	I	B	SP	
	51183.32460	0.00012	I	V	SP	
	51183.32435	0.00022	I	R	SP	
	51200.5682	0.0003	I	U	SL	
	51200.56779	0.00013	I	B	SL	
	51200.56777	0.00005	I	V	SL	
	51203.44184	0.00003	I	U	SL	
	51203.44187	0.00006	I	B	SL	
	51203.44206	0.00003	I	V	SL	
	51237.4496	0.0001	I	B	SP	
	51237.4508	0.0003	I	V	SP	
	51250.38380	0.00005	I	B	SP	
	51250.38368	0.00008	I	V	SP	
	51250.38325	0.00009	I	R	SP	
	51256.3719	0.0003	II	V	SP	
	51256.3734	0.0004	II	R	SP	
	51273.3757	0.0010	I	U	SL	
	51273.37539	0.00023	I	B	SL	
	51273.37538	0.00016	I	V	SL	
	51274.33421	0.00026	I	U	SL	
	51274.33334	0.00028	I	B	SL	
	51274.33357	0.00025	I	V	SL	
	51278.4121	0.0009	II	U	SL	
	51278.4104	0.0009	II	B	SL	
	51278.4118	0.0020	II	V	SL	
	ER Vul	51032.3975	0.0002	II	U	SL
		51032.4003	0.0004	II	B	SL
		51032.39722	0.00008	II	V	SL
51034.4925		0.0004	II	U	SL	
51034.4923		0.0002	II	B	SL	
51034.4921		0.0003	II	V	SL	
51041.4737		0.0004	II	U	SL	
51041.4726		0.0001	II	B	SL	
51041.4739		0.0002	II	V	SL	

Acknowledgements. This work was financially supported by the VEGA grant 5038/98.

References:

- Komžík, R., 1999, *private communication*
 Ghedini, S., 1982, *Software for Photometric Astronomy*, Willmann-Bell Publ. Comp.,
 Richmond