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NEW TIMES OF MINIMA OF ECLIPSING BINARY SYSTEMS

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Observatory and telescope:

50-cm $f/8.4$ Ritchey–Chrétien telescope (Ba50) of the Baja Astronomical Observatory (Hungary)

50-cm $f/6$ modified Cassegrain telescope (Baja Astronomical Robotic Telescope – BART1) of the Baja Astronomical Observatory (Hungary)

50-cm $f/15$ Cassegrain telescope (Pi50) of the Konkoly Observatory at Pizskéstető Mountain Station (Hungary)

25, and 40-cm Newton telescopes (Be25, Be40, respectively; Belgium)

30-cm Cassegrain telescope of Setec Observatory, Kansas (Se30)

Detector:

512 × 512 Apogee AP-7 CCD camera (Ba50)

765 × 510 SBIG ST-7 CCD camera (Ba50ST7)

4096 × 4096 Apogee Alta U16 CCD camera (BART1)

cooled *UBVRI* Photometer (Pi50)

2184 × 1472 SBIG ST10XME with filterwheel (filters Bessell specifications) (*Bexx*)

SBIG ST8 with filterwheel (filters Bessell specifications) (Se30)

Method of data reduction:

Reduction of Baja CCD frames was made with a customly developed IRAF[†] package, while the others were reduced by Mira-AP (6) and (7)*softwares.

[†] IRAF is distributed by the National Optical Astronomical Observatories, operated by the Association of the Universities for Research in Astronomy, inc., under cooperative agreement with the National Science Foundation

*Mira software is produced by Mirametrics Inc.

Method of minimum determination:

The minima times were computed with parabolic fitting, and in some cases with linearized Pogson-method or Kwee-van Woerden method (Kwee & van Woerden, 1956).

Times of minima:					
Star name	Time of min. HJD 2400000+	Error	Type	Filter	Rem.
XZ And	54012.5539	2	I	V	Bor/BART1
AB And	53936.4859	1	I	V	Bor/Ba50
EP And	54048.3612	1	II	V	Heg/BART1
	54048.5641	1	I	V	Heg/BART1
OO Aql	53613.4327	2	II	V	Bor/Ba50
	53881.5279	5	II	R	Bor/Ba50
V889 Aql	53255.392	1	I	B, V, R	Bor/Ba50
SS Ari	54056.4176	1	I	V	Heg/BART1
CL Aur	53675.4626	3	II	R	Bor/Ba50
IM Aur	53326.4270	2	I	V	Bor/Ba50
	53447.411	1	I	V	Bor/Ba50
	53790.4257	2	I	V, R	Reg+Bor/Pi50
	54015.5599	1	II	V	Bor/BART1
	54043.6266	2	I	V	Bor/BART1
IU Aur	52957.4095	12	II	B, V, R	Bir/Ba50ST7
	53035.3063	15	II	V, R	Heg/Ba50
	53764.4187	3	I	B	Be40
	53773.4739	3	I	R	Kis/Ba50
	53780.7217	3	I	V	Se30
	53789.7804	26	I	V	Se30
	53800.6456	3	I	V	Se30
	53803.3690	2	II	V	Bor/Ba50
	53813.3244	11	I	V	Be25
	54003.5350	14	I	V, R	Bor+Reg+Kov/Pi50
	54043.3875	4	I	V	Bor/BART1
TZ Boo	53802.4937	2	II	V, R	Bor/Ba50
	53802.6449	3	I	V, R	Bor/Ba50
	53803.5348	2	I	V, R	Bor/Ba50
Y Cam	53824.5101	3	I	R	Kis/Ba50
	54039.3840	6	I	V	Bor/BART1
AS Cam	53830.405	1	II	R	Kis/Ba50
DN Cas	54066.4437	4	I	V	Be40
PV Cas	53183.5042	3	II	V	Bor/Ba50
VW Cep	53608.4033	7	II	B, V, R	Bor/Ba50
	53848.4473	2	I	V	Bor/Ba50
	53848.5869	1	II	V	Bor/Ba50
	53892.4210	9	I	B, V, R	Reg+Bor/Pi50
	53947.385	1	II	V, R	Kov+Reg/Pi50
XX Cep	54004.4338	4	I	V, R	Bor+Kov+Reg/Pi50
	54018.4576	2	I	V	Bor/BART1
EK Cep	53745.2544	19	II	V	Be25
LS Del	53937.530:	3	I	B, V, R	Heg/Ba50
	53938.4305	3	II	V	Bir/BART1
DI Her	53933.4810	4	I	V	Bor/Ba50
HS Her	53935.4277	4	I	V	Bor/Ba50
V994 Her	53206.365	2	?	V, R	Bor/Ba50
SW Lac ^a	53596.5127	1	II	R	Bor/Ba50
	53596.5136	1	II	V	Bor/Ba50
	54015.3755	1	II	V	Bor/BART1
AR Lac	54001.4618	8	II	B, V, R	Reg+Bor/Pi50
AU Lac	53745.2926	2	I	V	Be40

Times of minima:						
Star name	Time of min. HJD 2400000+	Error	Type	Filter	Rem.	
UV Leo	53459.3746	3	II	<i>R</i>	Bor/Ba50	
	53797.5236	3	I	<i>V, R</i>	Bor/Pi50	
	53828.4280	2	II	<i>R</i>	Bor/Ba50	
U Peg	54000.544	1	II	<i>V, R</i>	Bor/Pi50	
AG Per	54034.429	1	I	<i>V, R</i>	Kov+Bor+Reg/Pi50	
	54039.5241	5	II	<i>V</i>	Bor/BART1	
β Per ^b	54084.360	3	II	$(V, R) + N$	Bor+Reg/Pi50	
EQ Tau	53802.3811	4	I	<i>V, R</i>	Bor/Ba50	
	53815.3525	2	I	<i>R</i>	Bor/Ba50	
TW UMa	53813.4281	8	I	—	Be25	
VV UMa	53765.5233	1	I	<i>V</i>	Be40	
ZZ UMa	53814.4329	1	I	<i>V</i>	Be25	
DW UMa	53080.5071	1	I	<i>R</i>	Bor/Ba50	
	53080.6434	1	I	<i>R</i>	Bor/Ba50	
	53437.3241	1	I	<i>V</i>	Bor/Ba50	
	53443.4711	2	I	<i>R</i>	Bor/Ba50	
	53443.6082	2	I	<i>R</i>	Bor/Ba50	
	53451.3942	1	I	<i>V</i>	Bor/Ba50	
	53767.3656	2	I	<i>R</i>	Bor/Ba50	
	53815.4506	1	I	<i>R</i>	Bor/Ba50	
	53815.5869	1	I	<i>R</i>	Bor/Ba50	
	53822.4174	2	I	<i>R</i>	Bor/Ba50	
	53861.3504	1	I	<i>R</i>	Bor/Ba50	
	53861.4875	2	I	<i>R</i>	Bor/Ba50	
	LP UMa	53080.5012	3	II	<i>R</i>	Bor/Ba50
		53443.5454	7	I	<i>V, R</i>	Bor/Ba50
		53451.4473	4	II	<i>V</i>	Bor/Ba50
53767.393		2	I	<i>R</i>	Bor/Ba50	
53815.5834		4	II	<i>R</i>	Bor/Ba50	
53819.4545		2	I	<i>V</i>	Bor/Ba50	
53822.4011		3	II	<i>R</i>	Bor/Ba50	
	53861.4435	4	II	<i>R</i>	Bor/Ba50	

Explanation of the remarks in the table:

Observer(s)/Instrument

^a: SW Lac: On the night 53596 the discrepancy between the mid-eclipse time in *V* and *R* band is supposed to be real.

^b: β Per: Due to the brightness of the system we had to use an additional neutral filter (denoted by *N*).

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Reference:

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