

B.R.N.O. Contributions #36

Times of minima

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Abstract

Paper presents observations of eclipsing binaries acquired by the Variable Star and Exoplanet Section of Czech Astronomical Society members (B.R.N.O. observing project). Paper contains 557 minima timings for 265 eclipsing binaries, obtained by 21 observers during 2008 – 2009 period.

We introduce **557 minima timings** (1 visual and 556 CCD-based) of **265 eclipsing binaries** acquired by **21 observers**, members and collaborators of the Variable Star and Exoplanet Section of Czech Astronomical Society (“Brno Regional Network of Observers” group; hereafter B.R.N.O.), during 2008 – 2009 period.

Each published observation can be viewed in detail following the active link under HJD number. There are available both light curve and reference CCD frame (finding chart for visual observation). Notes by observers can be found there as well. If orbital elements are known (Paschke, 2009), the O-C value is given in the main table as well.

This paper contains only new, previously unpublished observations.

Visual observation have been performed using Nijland - Blazhko method and the minima timings have been determined by tracing paper method.

CCD frames were mostly reduced by C-MuniPack code (Motl, 2007), the well-known adaptation of MuniPack code (Hroch, 1998), based on DaoPhot routines (Stetson, 1987, 1991). All frames were dark-frame and flat-field corrected first before application of further reduction steps. Minima timings were mostly determined by Kwee-van Woerden method using program AVE (Barberá, 1999). The Tintagel, Taranis and SOP neural network based procedures (Gaspani, 1995) were applied in some cases.

The CCD-based minima timings already come with corresponding errors, usually determined by observers themselves. The error values depends on used method, data quality and depth of the observed minima.

The 6th column of the main table contains an independent indicator of the timing determination accuracy – the light curve minimum coverage factor – given in fractional form as a ratio between all acquired data points and data points covering decreasing branch of a minimum.

We would like to point out that the character of a minimum (primary/secondary) depends only on used orbital elements – especially for EW binaries. All orbital elements used for character of minimum determination are given in table 2 and were taken from the O-C gateway, maintained by Anton Paschke (Paschke, 2009). However, in some cases, especially in case of newly discovered eclipsing binaries, these elements remain unknown.

Explanation to the main table

Column 0 – objects designation. G2779.0288 means GSC 2779-0288. CzeV is acronym for new variables found by Czech astronomers (Brát, 2008).

Column 1 – heliocentric julian date of observed minimum (JD_{hel} – 2 400 000) based on coordinated universal time UTC

Column 2 – error of minimum determination in days

Column 3 – identification of primary (I) or secondary (II) minimum

Column 4 – O-C value in [days]. The value is given as URL link pointing to O-C gateway, where picture with highlighted observation (in red color) appears.

Column 5 – photometric band of CCD observation or mark “vis” for visual observation

Column 6 – total number of measurements / number of data on decreasing branch of light curve

Column 7 – observer’s identification

Column 8 – equipment used for observation.

Table 1 – Observations of eclipsing binaries

AS And							
54320.47992	0.0005	I	+0.0049	CCD+R	170/87	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54831.23285	0.0004	I	+0.0108	CCD+R	137/63	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
CN And							
54758.31212	0.0002	II	+0.0023	CCD+R	235/116	Roman Ehrenberger	RL 96/400 + HX516 + R
54774.27434	0.0003	I	-0.0017	CCD+R	165/66	Roman Ehrenberger	RL 96/400 + HX516 + R
54777.28380	0.0004	II	-0.0004	CCD+R	218/81	Roman Ehrenberger	RL 96/400 + HX516 + R
			show all				
DW And							
54766.38587	0.0016	I	-0.0127	CCD+R	70/47	Frantisek Lomoz	254/1016+ST2000XM
EP And							
54830.31331	0.0002	II	-0.0071	CCD+V	44/31	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54830.31341	0.0002	II	-0.0070	CCD+R	46/33	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54830.31351	0.0002	II	-0.0069	CCD+I	40/27	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
GZ And							
54844.32656	0.0002	II	-0.0061	CCD+V	62/43	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54844.32656	0.0002	II	-0.0061	CCD+I	68/48	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54844.32666	0.0001	II	-0.0060	CCD+R	68/48	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
HS And							
53633.39087	0.0002	I	-0.0002	CCD+R	119/66	Martin Lehky	0.40-m f/5 + CCD ST7 + R
53971.39984	0.0002	I	+0.0002	CCD+R	107/55	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
V 404 And							
54023.41946	0.0001	I	-0.0028	CCD+R	390/265	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V 440 And							
54760.42211	0.0014	II	+0.0008	CCD+V	290/88	Frantisek Lomoz	254/1016+ST2000XM
CzeV041 And							
54760.35611	0.0014	I	+0.0117	CCD+V	287/49	Frantisek Lomoz	254/1016+ST2000XM
54760.56861	0.0014	II	+0.0121	CCD+V	287/225	Frantisek Lomoz	254/1016+ST2000XM
			show all				
G2787.1836 And							
54758.27973	0.0004	I	-----	CCD+R	222/59	Roman Ehrenberger	RL 96/400 + HX516 + R
54774.32003	0.0004	I	-----	CCD+R	156/106	Roman Ehrenberger	RL 96/400 + HX516 + R
54777.28957	0.0004	I	-----	CCD+R	213/97	Roman Ehrenberger	RL 96/400 + HX516 + R
V 761 Aql							
53633.29134	0.0003	I	-0.0029	CCD+R	65/25	Martin Lehky	0.40-m f/5 + CCD ST7 + R
53989.38121	0.0003	I	-0.0058	CCD+R	111/54	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54019.32282	0.0003	I	-0.0059	CCD+R	76/52	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				

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V 889 Aql									
54938.54917	0.0012	II	-0.0248	CCD+V	145/57	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
54938.55117	0.0008	II	-0.0228	CCD+I	139/59	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
54938.55147	0.0004	II	-0.0225	CCD+R	138/58	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
			show all						
CX Aqr									
54763.30133	0.0003	I	+0.0022	CCD+R	110/57	Roman Ehrenberger		RL 96/400 + HX516 + R	
TX Ari									
54025.49989	0.0001	I	+0.0106	CCD+R	307/166	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
RY Aur									
54020.54337	0.0001	I	-0.0071	CCD+R	141/41	Martin Lehky & Petr Horalek		0.40-m f/5 + CCD ST7 + R	
CG Aur									
54843.54137	0.0009	II	+0.0442	CCD+V	44/16	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
54843.54147	0.0016	II	+0.0443	CCD+I	41/14	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
54843.54207	0.0007	II	+0.0450	CCD+R	44/16	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
54844.39833	0.0001	I	-0.0016	CCD+R	161/89	Radek Kocián		Meade 12\" LX200/f6.3 + SBIG ST-8XME	
			show all						
CL Aur									
51880.45260	0.0002	I	-0.0104	CCD+V	24/12	Martin Lehky		0.25-m f/5 + CCD ST5C + V	
51901.60745	0.0003	I	-0.0099	CCD+V	104/50	Martin Lehky		0.25-m f/5 + CCD ST5C + V	
54834.61356	0.0001	I	+0.0119	CCD+R	379/265	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
54843.32100	0.0002	I	+0.0088	CCD+I	55/40	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
54843.32130	0.0002	I	+0.0091	CCD+R	54/39	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
			show all						
DO Aur									
54532.32134	0.0005	I	-0.0001	CCD+R	129/84	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
EP Aur									
54491.31500	0.0003	II	+0.0028	CCD+R	114/72	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
54758.45070	0.0010	II	+0.0028	CCD+Clear	364/64	Václav Přibík		Newton 254/1200, CCD G2-1600, EQ6	
			show all						
FW Aur									
54023.58322	0.0001	I	-0.0029	CCD+R	114/51	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
HW Aur									
53632.62442	0.0003	I	-0.0060	CCD+R	90/72	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
IZ Aur									
53632.50225	0.0001	I	+0.0024	CCD+R	73/45	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
54020.39831	0.0001	I	+0.0014	CCD+R	144/75	Martin Lehky & Petr Horalek		0.40-m f/5 + CCD ST7 + R	
			show all						
KO Aur									
54749.50643	0.0002	II	+0.0145	CCD+U	199/69	Lubomír Urbančok		Yepun 254/1200	
KU Aur									
53633.59936	0.0002	I	-0.0026	CCD+R	56/35	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
53992.52157	0.0004	I	-0.0057	CCD+R	89/46	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
			show all						
QT Aur									
53621.53262	0.0003	I	-0.1955	CCD+R	76/40	Martin Lehky		0.40-m f/5 + CCD ST7 + R	

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53633.51721	0.0003	I	-0.0868	CCD+R	68/47	Martin Lehky	0.40-m f/5 + CCD ST7 + R
53987.60296	0.0003	I	-0.0179	CCD+R	87/50	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
V 364 Aur							
53638.61746	0.0003	I	-0.0005	CCD+R	55/20	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54019.58596	0.0003	I	-0.0006	CCD+R	184/64	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
V 535 Aur							
54757.42395	0.0002	I	-0.0746	CCD+Clear	376/100	Jaroslav Trnka	Newton 200/1000 + CCD ST-9E + clear
54757.61513	0.0003	II	-----	CCD+Clear	376/291	Jaroslav Trnka	Newton 200/1000 + CCD ST-9E + clear
54760.50253	0.0001	I	-0.0741	CCD+Clear	383/146	Jaroslav Trnka	Newton 200/1000 + CCD ST-9E + clear
54926.32944	0.0004	I	-0.0779	CCD+Clear	76/17	Jaroslav Trnka	Newton 200/1000 CCD ST-9E
			show all				
SY Boo							
54922.48658	0.0005	I	-0.0339	CCD+R	125/34	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54928.56200	0.0005	II	-----	CCD+R	216/124	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54937.49058	0.0001	I	-0.0341	CCD+R	286/111	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
TZ Boo							
54926.35580	0.0004	I	-0.0026	CCD+I	32/17	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54926.35620	0.0002	I	-0.0022	CCD+V	30/14	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54926.35640	0.0002	I	-0.0020	CCD+R	32/17	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54961.42281	0.0006	I	-0.0006	CCD+R	39/22	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54961.42291	0.0008	I	-0.0005	CCD+I	39/24	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54961.42331	0.0008	I	-0.0001	CCD+V	30/17	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
XY Boo							
54947.37349	0.0007	I	+0.0135	CCD+R	23/15	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54947.37479	0.0007	I	+0.0148	CCD+I	21/16	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54947.37579	0.0003	I	+0.0158	CCD+V	24/17	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
ZZ Boo							
54946.39319	0.0005	II	+0.0015	CCD+V	89/29	O. Macek, M. Exnerová, M. Vitek	RL150, G2CCD
AC Boo							
54946.46946	0.0002	I	+0.0079	CCD+R	28/12	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54946.46966	0.0002	I	+0.0081	CCD+V	28/13	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54946.46986	0.0002	I	+0.0083	CCD+I	30/13	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
CK Boo							
54942.40811	0.0002	II	-0.0109	CCD+R	70/33	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54942.40911	0.0003	II	-0.0099	CCD+I	70/35	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54944.36131	0.0007	I	-0.0110	CCD+R	27/9	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54944.36151	0.0007	I	-0.0108	CCD+I	31/9	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
EQ Boo							
54943.40415	0.0014	I	-0.0042	CCD+R	158/109	František Lomoz	Zeiss 130/630+ST2000XM
EW Boo							
54937.40606	0.0004	I	+0.0068	CCD+V	101/65	Radek Dřevěný	RL 200/660 CCD G2-402, guid. RF 70/500 CCD G1 30
54937.40666	0.0004	I	+0.0074	CCD+R	103/66	Radek Dřevěný	RL 200/660 CCD G2-402, guid. RF 70/500 CCD G1 30
			show all				

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FY Boo							
54175.47714	0.0001	II	-0.0013	CCD+R	317/102	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54175.59765	0.0001	I	-0.0010	CCD+R	317/239	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
GG Boo							
54922.40582	0.0005	II	+0.0193	CCD+Clear	180/35	Jaroslav Trnka	Newton 200/1000 CCD ST-9E
GH Boo							
54921.46209	0.0006	II	-0.0343	CCD+V	79/11	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
54921.46465	0.0013	II	-0.0317	CCD+I	81/13	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
54921.46514	0.0007	II	-0.0312	CCD+R	78/12	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
			show all				
GK Boo							
54925.36514	0.0001	II	-0.0616	CCD+R	79/13	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54947.34260	0.0014	II	-0.0620	CCD+R	273/24	František Lomoz	Zeiss 130/630+ST2000XM
54959.52489	0.0001	I	-0.0631	CCD+R	287/231	František Lomoz	Zeiss 130/630+ST2000XM
			show all				
GP Boo							
54938.41047	0.0004	I	-0.0023	CCD+R	21/6	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54938.41147	0.0010	I	-0.0013	CCD+I	19/5	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54938.41187	0.0006	I	-0.0009	CCD+V	23/7	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
GU Boo							
54935.48459	0.0001	I	+0.0742	CCD+R	380/172	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54936.46194	0.0001	I	+0.0741	CCD+R	399/179	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54943.54830	0.0001	II	+0.0741	CCD+R	138/95	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
AV Cam							
54934.38944	0.0002	I	+0.0016	CCD+I	133/59	Radek Dřevěný	RL 200/660 CCD G2-402, guid. RF 70/500 CCD G1 30
HW Cam							
54929.43774	0.0001	II	+0.0174	CCD+R	207/119	Radek Kocián	Newton 200/1200 + SBIG ST8-XME
LR Cam							
51965.61770	0.0002	I	-0.0011	CCD+V	57/31	Martin Lehky	0.25-m f/5 + CCD ST5C + V
51968.43924	0.0003	II	-0.0015	CCD+V	188/67	Martin Lehky	0.25-m f/5 + CCD ST5C + V
51968.65936	0.0004	I	+0.0016	CCD+V	188/181	Martin Lehky	0.25-m f/5 + CCD ST5C + V
51971.47888	0.0005	II	-0.0008	CCD+V	60/45	Martin Lehky	0.25-m f/5 + CCD ST5C + V
51975.38667	0.0003	II	-0.0003	CCD+V	193/49	Martin Lehky	0.25-m f/5 + CCD ST5C + V
51975.60294	0.0002	I	-0.0011	CCD+V	193/159	Martin Lehky	0.25-m f/5 + CCD ST5C + V
52024.44544	0.0004	II	+0.0008	CCD+V	125/46	Martin Lehky	0.25-m f/5 + CCD ST5C + V
54830.51160	0.0001	I	+0.0095	CCD+R	602/72	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
RZ Cas							
54765.57436	0.0001	I	-0.0006	CCD+V	458/202	Pavol A. Dubovsky	photolense 100/400
54782.30760	0.0001	I	-0.0009	CCD+V	442/198	Pavol A. Dubovsky	photolense 100/400
			show all				
ZZ Cas							
54829.25645	0.0005	II	-0.0118	CCD+R	90/44	Roman Ehrenberger	RL 96/400 + HX516 + R
AB Cas							
54753.29399	0.0004	II	-0.0008	CCD+R	99/60	Roman Ehrenberger	RL 96/400 + HX516 + R

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AH Cas 53992.41964	0.0001	I	+0.0024	CCD+R	108/37	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
AL Cas 54753.51440	0.0002	II	+0.0019	CCD+R	89/46	Tomáš Kalisch		Newton 200/1200 + SBIG ST8-XME	
BS Cas 54780.58250	0.0001	I	+0.0047	CCD+R	339/238	Radek Kocián		Newton 200/1200 + SBIG ST8-XME	
DO Cas 54596.52405	0.0003	I	+0.0002	CCD+R	42/24	Petr Svoboda		RF 34/135 mm+ST-7XME+BVRI (Bessell 1990)	
54709.49385	0.0002	I	+0.0001	CCD+R	96/22	Robert Uhlař		RF34/135	
54772.48402	0.0010	I	+0.0010	CCD+R	71/38	Robert Uhlař		RF34/135	
54830.33812	0.0003	II	+0.0009	CCD+R	142/69	Petr Svoboda		RF 34/135 mm+ST-7XME+BVRI (Bessell 1990)	
			show all						
EP Cas 54760.31248	0.0004	II	+0.0037	CCD+R	93/44	Roman Ehrenberger		RL 96/400 + HX516 + R	
54830.26943	0.0006	II	+0.0050	CCD+R	109/46	Roman Ehrenberger		RL 96/400 + HX516 + R	
			show all						
IS Cas 53859.56394	0.0002	I	-0.0021	CCD+R	142/84	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
LU Cas 54766.29988	0.0003	I	+0.0041	CCD+R	141/69	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
MV Cas 53988.46483	0.0002	I	-0.0099	CCD+R	95/42	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
54364.40736	0.0002	I	-0.0089	CCD+R	155/59	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
			show all						
NV Cas 53989.50972	0.0003	I	+0.0047	CCD+R	74/35	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
OQ Cas 53990.47902	0.0002	II	-----	CCD+R	164/100	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
53993.34586	0.0003	II	-----	CCD+R	241/76	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
54003.37944	0.0005	II	-----	CCD+R	161/21	Martin Lehky & Petr Horalek		0.40-m f/5 + CCD ST7 + R	
54008.39588	0.0003	II	-----	CCD+R	345/117	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
54721.49190	0.0004	II	-----	CCD+R	227/113	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
V 336 Cas 54308.39842	0.0001	I	+0.0030	CCD+R	171/84	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
V 368 Cas 54810.47131	0.0003	I	+0.0061	CCD+R	195/121	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
V 374 Cas 54043.31131	0.0001	I	-0.0044	CCD+R	227/95	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
V 375 Cas 54851.33642	0.0005	I	+0.0093	CCD+R	41/29	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
54851.33752	0.0016	I	+0.0104	CCD+V	33/26	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
54851.33902	0.0013	I	+0.0119	CCD+I	41/31	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
			show all						

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V 381 Cas 54841.24514	0.0002	II	+0.0199	CCD+R	196/76	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
V 527 Cas 54389.48464	0.0001	I	+0.0107	CCD+R	376/225	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
V 799 Cas 54771.38710 54812.48515	0.0001	I	+1.7297	CCD+R	472/273	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
	0.0001	II	+0.4724	CCD+R	177/114	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
			show all						
V 959 Cas 54841.29586	0.0006	I	-0.0065	CCD+R	67/29	Roman Ehrenberger		RL 96/400 + HX516 + R	
CzeV129 Cas 53990.40218 53993.32926 54003.39373 54005.33532 54008.57830 54115.40837 54721.58359 54758.27621 54758.59930	0.0005	I	-----	CCD+R	163/41	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
	0.0010	II	-----	CCD+R	192/21	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
	0.0010	II	-----	CCD+R	135/15	Martin Lehky & Petr Horalek		0.40-m f/5 + CCD ST7 + R	
	0.0005	I	-----	CCD+R	248/81	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
	0.0007	I	-----	CCD+R	340/266	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
	0.0004	II	-----	CCD+R	172/76	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
	0.0009	I	-----	CCD+R	190/158	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
	0.0008	II	-----	CCD+R	328/46	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
	0.0008	I	-----	CCD+R	328/277	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
CzeV135 Cas 54780.62335	0.0001	II	-----	CCD+R	330/281	Radek Kocián		Newton 200/1200 + SBIG ST8-XME	
G4297.1664 Cas 54763.33788	0.0001	I	-0.0545	CCD+R	150/85	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
BE Cep 54749.28247 54753.31204	0.0003	I	+0.0030	CCD+Clear	113/57	Lubomír Urbančok		Yepun 254/1200	
	0.0003	II	+0.0009	CCD+Clear	140/63	Lubomír Urbančok		Yepun 254/1200	
			show all						
CO Cep 54872.38375	0.0002	II	+0.2082	CCD+R	185/121	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
CzeV153 Cep 54593.49629 54601.51222	0.0004	I	-----	CCD+R	114/93	Luboš Brát		RL200, f/6 + ST8	
	0.0003	II	-----	CCD+R	147/105	Luboš Brát		RL200, f/6 + ST8, guider RF80/600+G1-0300	
CzeV154 Cep 54601.40182	0.0004	I	-----	CCD+R	142/41	Luboš Brát		RL200, f/6 + ST8, guider RF80/600+G1-0300	
DP Cep 54749.38239	0.0002	I	+0.0219	CCD+Clear	160/107	Lubomír Urbančok		Yepun 254/1200	
EF Cep 54935.41235	0.0003	II	+0.0133	CCD+R	132/84	Radek Dřevěný		RL 200/660 CCD G2-402, guid. RF 70/500 CCD G1 30	
EO Cep 54788.59093	0.0002	I	+0.0069	CCD+Clear	289/131	Jaroslav Trnka		Newton 200/1000+CCD ST-9E	

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GI Cep							
53621.44425	0.0004	I	+0.0094	CCD+R	78/65	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54363.37407	0.0001	I	-0.0020	CCD+R	204/145	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
IM Cep							
53622.43397	0.0003	I	+0.0091	CCD+R	174/120	Martin Lehky	0.40-m f/5 + CCD ST7 + R
53868.49268	0.0003	I	+0.0049	CCD+R	119/66	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54841.21506	0.0004	II	-0.0049	CCD+R	75/27	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
IP Cep							
54751.34122	0.0006	II	-0.0029	CCD+R	82/38	Roman Ehrenberger	RL 96/400 + HX516 + R
OT Cep							
53985.59840	0.0001	I	-0.0007	CCD+R	72/39	Martin Lehky	0.40-m f/5 + CCD ST7 + R
SY Cep							
54950.45025	0.0003	I	-0.0216	CCD+R	60/32	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
V 338 Cep							
54789.26448	0.0004	II	+0.0093	CCD+R	145/79	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
V 357 Cep							
54934.35859	0.0003	II	+0.0180	CCD+Clear	223/101	Jaroslav Trnka	Newton 200/1000 CCD ST-9E
V 397 Cep							
54776.29275	0.0001	I	-0.0001	CCD+R	612/312	Tomáš Kalisch	Meade 12 LX200GPS + ST8-XME (3x3 bin)
54922.37082	0.0001	I	-0.0005	CCD+R	306/166	Radek Kocián	Newton 200/1200 + SBIG ST8-XME
			show all				
G4500.730 Cep							
54788.58608	0.0004	I	-----	CCD+Clear	289/124	Jaroslav Trnka	Newton 200/1000+CCD ST-9E
USNO-B1 1690-0011688 Cep							
54934.32959	0.0003	I	-----	CCD+Clear	214/57	Jaroslav Trnka	Newton 200/1000 CCD ST-9E
TV Cet							
54771.53211	0.0002	II	-0.0549	CCD+R	246/150	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
AC CMi							
54841.43349	0.0003	I	+0.0043	CCD+R	144/57	Roman Ehrenberger	RL 96/400 + HX516 + R
AV CMi							
54893.32133	0.0006	I	-0.1542	CCD+R	70/30	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
EH Cnc							
54936.36583	0.0003	II	-0.0074	CCD+V	17/10	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54936.36583	0.0002	II	-0.0074	CCD+I	23/13	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54936.36613	0.0003	II	-0.0071	CCD+R	19/10	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
WW Cnc							
54203.39101	0.0001	I	-0.0089	CCD+R	390/244	Martin Lehky	0.40-m f/5 + CCD ST7 + R

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G0816.1907 Cnc 54760.62609	0.0010	II	+0.0033	CCD+Clear	247/121	Václav Přebík	Newton 254/1200, CCD G2-1600, EQ6
CM Com 54925.58760	0.0004	I	+0.0266	CCD+Clear	273/187	Jaroslav Trnka	Newton 200/1000 CCD ST-9E
LR Com 54937.34840	0.0008	II	-0.0071	CCD+R	82/40	Roman Ehrenberger	RL 96/400 + HX516 + R
TW CrB 54950.41153 54950.41163	0.0003	I	+0.0045	CCD+V	18/8	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
	0.0004	I	+0.0046 show all	CCD+R	20/9	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
UX CrB 54941.53393	0.0001	I	+0.0727	CCD+R	349/253	Martin Lehky	0.40-m f/5 + CCD ST7 + R
UX CVn 54872.53806 54872.54146	0.0012	I	+0.0249	CCD+V	66/24	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
	0.0010	I	+0.0283 show all	CCD+R	67/27	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
VV CVn 53833.44735 54172.52490	0.0004	I	-0.0032	CCD+R	134/55	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
	0.0004	I	+0.0035 show all	CCD+R	235/162	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
YZ CVn 54135.59411	0.0001	I	-0.0034	CCD+R	168/76	Martin Lehky	0.40-m f/5 + CCD ST7 + R
BO CVn 54933.44628	0.0004	I	+0.0010	CCD+R	177/76	Roman Ehrenberger	RL 96/400 + HX516 + R
CI CVn 54941.44437	0.0010	II	-0.0047	CCD+R	236/122	Martin Lehky	EQ6 + 2.8/80 Zeiss Biometar lens + CCD ST5C
DK CVn 54220.37189 54929.40664 54936.33792	0.0002	I	-0.0026	CCD+R	372/38	Martin Lehky	0.40-m f/5 + CCD ST7 + R
	0.0002	II	-0.0027	CCD+R	223/147	Martin Lehky	0.40-m f/5 + CCD ST7 + R
	0.0002	II	-0.0010 show all	CCD+Clear	101/55	Jaroslav Trnka	Newton 200/1000 CCD ST-9E
DL CVn 54921.35977	0.0002	II	+0.0078	CCD+Clear	142/65	Jaroslav Trnka	Newton 200/1000 CCD ST-9E
VV Cyg 54028.36504	0.0001	I	+0.0061	CCD+R	82/39	Martin Lehky	0.40-m f/5 + CCD ST7 + R
DK Cyg 54737.42227 54737.42237	0.0004	I	+0.0096	CCD+I	49/38	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
	0.0007	I	+0.0097 show all	CCD+V	49/39	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
GV Cyg 54317.43688	0.0001	I	+0.0037	CCD+R	317/139	Martin Lehky	0.40-m f/5 + CCD ST7 + R

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V 370 Cyg							
54953.46944	0.0002	I	-0.0009	CCD+I	20/7	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54953.46964	0.0005	I	-0.0007	CCD+R	22/7	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
V 385 Cyg							
54204.59780	0.0002	I	-0.0009	CCD+R	172/127	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V 401 Cyg							
54738.34028	0.0003	II	+0.0051	CCD+R	43/26	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54738.34108	0.0004	II	+0.0059	CCD+V	42/26	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54738.34158	0.0002	II	+0.0064	CCD+I	38/26	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
V 443 Cyg							
54269.45073	0.0002	I	-0.0068	CCD+R	186/74	Martin Lehky & Dalibor Hanzl	0.40-m f/5 + CCD ST7 + R
V 469 Cyg							
54207.53412	0.0001	I	+0.0071	CCD+R	190/77	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V 478 Cyg							
54761.25594	0.0003	II	+0.0075	CCD+R	147/77	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
54935.53397	0.0007	I	-0.0091	CCD+R	225/77	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
			show all				
V 498 Cyg							
54938.54004	0.0006	I	+0.0287	CCD+V	49/28	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54938.54194	0.0005	I	+0.0306	CCD+R	35/24	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
V 664 Cyg							
54712.43917	0.0001	I	+0.4753	CCD+R	439/193	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V 706 Cyg							
54298.48927	0.0001	I	-0.0029	CCD+R	103/37	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V 711 Cyg							
54270.45142	0.0002	I	-0.0009	CCD+R	156/81	Martin Lehky & Dalibor Hanzl	0.40-m f/5 + CCD ST7 + R
V 807 Cyg							
54304.45728	0.0002	I	-0.0120	CCD+R	246/107	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V 809 Cyg							
54297.45332	0.0001	I	-0.0003	CCD+R	259/115	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V 842 Cyg							
54205.58325	0.0003	I	-0.0028	CCD+R	188/132	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54645.46462	0.0006	I	-0.0003	CCD+R	96/54	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
V 880 Cyg							
54218.48923	0.0001	I	-0.0017	CCD+R	268/108	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V 922 Cyg							
54639.47271	0.0003	I	+0.0326	CCD+R	152/85	Martin Lehky & Dalibor Hanzl	0.40-m f/5 + CCD ST7 + R
V 963 Cyg							
54203.56129	0.0001	I	+0.0010	CCD+R	168/84	Martin Lehky	0.40-m f/5 + CCD ST7 + R

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V1019 Cyg 54327.49764	0.0002	I	-0.0010	CCD+R	194/139	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V1047 Cyg 54223.46449	0.0003	I	+0.0130	CCD+R	348/174	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V1200 Cyg 54931.55771	0.0003	I	-0.0261	CCD+Clear	132/46	Jaroslav Trnka	Newton 200/1000 CCD ST-9E
V1414 Cyg 54319.49154	0.0002	I	+0.0086	CCD+R	345/214	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V1723 Cyg 53638.27594 54307.50054	0.0001 0.0001	I I	-0.0116 -0.0091	CCD+R CCD+R	79/32 192/83	Martin Lehky Martin Lehky	0.40-m f/5 + CCD ST7 + R 0.40-m f/5 + CCD ST7 + R
			show all				
V1787 Cyg 54173.54727	0.0002	I	+0.0054	CCD+R	193/49	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V1909 Cyg 54365.43409	0.0002	I	+0.0187	CCD+R	321/219	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V2239 Cyg 54027.32741	0.0001	I	-0.0009	CCD+R	242/116	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
V2311 Cyg 54338.51577	0.0004	I	+0.0428	CCD+R	160/111	Martin Lehky	0.40-m f/5 + CCD ST7 + R
CzeV45 Cyg 54298.49111	0.0004	I	-----	CCD+R	83/39	Martin Lehky	0.40-m f/5 + CCD ST7 + R
RR Del 54782.25965	0.0002	I	-0.0101	CCD+R	265/159	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
WX Dra 53818.59464	0.0001	I	+0.0029	CCD+R	146/70	Martin Lehky	0.40-m f/5 + CCD ST7 + R
AR Dra 54831.59429	0.0002	II	+0.0124	CCD+R	379/145	Martin Lehky	0.40-m f/5 + CCD ST7 + R
AU Dra 54214.34613	0.0004	I	-0.0000	CCD+R	67/18	Martin Lehky	0.40-m f/5 + CCD ST7 + R
AX Dra 54829.54167 54928.39954 54928.40107 54928.40186	0.0003 0.0004 0.0005 0.0004	II II II II	-0.0028 -0.0054 -0.0038 -0.0030	CCD+R CCD+V CCD+R CCD+I	144/66 94/69 92/68 45/22	Roman Ehrenberger Radek Dřevěný Radek Dřevěný Radek Dřevěný	RL 96/400 + HX516 + R RL 200/660 CCD G2-402, guid. RF 70/500 CCD G1 30 RL 200/660 CCD G2-402, guid. RF 70/500 CCD G1 30 RL 200/660 CCD G2-402, guid. RF 70/500 CCD G1 30
			show all				
BL Dra 54955.48995	0.0002	II	+0.0814	CCD+R	151/110	Radek Kocián	Newton 200/1200 + SBIG ST8-XME

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BV Dra							
54925.40134	0.0002	II	-0.0009	CCD+I	144/41	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
54925.40164	0.0002	II	-0.0006	CCD+V	144/42	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
54925.40164	0.0001	II	-0.0006	CCD+R	138/41	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
			show all				
BW Dra							
54925.43034	0.0003	II	-0.0026	CCD+R	139/68	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
54925.43064	0.0003	II	-0.0023	CCD+I	143/72	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
54925.43084	0.0002	II	-0.0021	CCD+V	144/72	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
			show all				
BX Dra							
54941.35948	0.0003	I	-0.0001	CCD+R	130/66	Roman Ehrenberger	RL 96/400 + HX516 + R
CV Dra							
54937.41955	0.0002	II	+0.0061	CCD+R	133/63	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
FX Dra							
54507.62048	0.0002	I	+0.0132	CCD+R	290/171	Martin Lehky	0.40-m f/5 + CCD ST7 + R
GQ Dra							
54712.41043	0.0007	II	-0.0018	CCD+I	60/35	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54712.41283	0.0008	II	+0.0006	CCD+V	62/42	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
LN Dra							
54521.52138	0.0002	II	-0.0054	CCD+R	278/73	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54946.35194	0.0002	II	-0.0014	CCD+R	156/73	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
LZ Dra							
54946.35234	0.0004	II	-0.0423	CCD+R	126/33	Roman Ehrenberger	RL 96/400 + HX516 + R
G4420.1984 Dra							
54942.36134	0.0003	I	-0.0065	CCD+R	104/42	Roman Ehrenberger	RL 96/400 + HX516 + R
BZ Eri							
54831.41418	0.0001	II	+0.0041	CCD+R	215/96	Roman Ehrenberger	RL 96/400 + HX516 + R
RX Gem							
54925.45050	0.0018	I	+0.0771	CCD+V	57/47	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
CU Gem							
54524.43401	0.0010	I	-0.0080	CCD+R	117/54	Martin Lehky	0.40-m f/5 + CCD ST7 + R
GR Gem							
54831.34817	0.0003	I	-0.0296	CCD+Clear	81/31	Jaroslav Trnka	Newton 200/1000+CCD ST-9E
GV Gem							
54830.33602	0.0003	I	-0.2640	CCD+Clear	184/81	Jaroslav Trnka	Newton 200/1000+CCD ST-9E
54857.36880	0.0007	I	-0.2312	CCD+Clear	118/94	Jaroslav Trnka	Newton 200/1000+CCD ST-9E
			show all				
GW Gem							
54857.32326	0.0004	II	+0.0007	CCD+U	49/19	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7

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HR Gem								
54829.41687	0.0003	II	-0.0087	CCD+R	156/81	Roman Ehrenberger	RL 96/400 + HX516 + R	
54835.29810	0.0003	I	-0.0073	CCD+R	33/14	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7	
54835.29820	0.0004	I	-0.0072	CCD+I	33/13	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7	
			show all					
MU Gem								
54829.61224	0.0003	II	+0.0028	CCD+Clear	252/199	Jaroslav Trnka	Newton 200/1000+CCD ST-9E	
54830.33795	0.0003	II	+0.0023	CCD+Clear	201/90	Jaroslav Trnka	Newton 200/1000+CCD ST-9E	
			show all					
OR Gem								
54531.39251	0.0002	I	+0.0242	CCD+R	315/173	Martin Lehky	0.40-m f/5 + CCD ST7 + R	
V 337 Gem								
54830.63975	0.0011	I	-0.0114	CCD+R	75/54	Petr Svoboda	RF 34/135 mm+ST-7XME+BVRI (Bessell 1990)	
CzeV176 Gem								
54857.39394	0.0005	II	-----	CCD+Clear	181/155	Jaroslav Trnka	Newton 200/1000+CCD ST-9E	
TX Her								
54955.36678	0.0005	II	-0.0047	CCD+I	30/14	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7	
54955.36718	0.0005	II	-0.0043	CCD+V	29/14	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7	
54955.36728	0.0005	II	-0.0042	CCD+R	29/13	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7	
54959.48994	0.0029	II	-0.0012	vis	9/5	Jaroslav Trnka	Somet 25x100	
			show all					
CT Her								
54936.45449	0.0003	I	+0.0040	CCD+R	25/11	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7	
54936.45469	0.0008	I	+0.0042	CCD+V	27/12	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7	
54936.45529	0.0006	I	+0.0048	CCD+I	27/12	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7	
			show all					
DK Her								
54946.45261	0.0003	I	-0.0088	CCD+B	18/4	Pavel Marek	RL200/800 + G2 (filtr:BVRI)	
54946.45261	0.0003	I	-0.0088	CCD+R	34/12	Pavel Marek	RL200/800 + G2 (filtr:BVRI)	
54946.45321	0.0005	I	-0.0082	CCD+I	34/15	Pavel Marek	RL200/800 + G2 (filtr:BVRI)	
54946.45331	0.0004	I	-0.0081	CCD+V	25/11	Pavel Marek	RL200/800 + G2 (filtr:BVRI)	
			show all					
FW Her								
54946.52737	0.0002	I	+0.0076	CCD+R	107/63	Martin Lehky	0.40-m f/5 + CCD ST7 + R	
IK Her								
54925.58037	0.0003	I	+0.0243	CCD+R	98/44	Martin Lehky	0.40-m f/5 + CCD ST7 + R	
V 747 Her								
54935.53947	0.0003	I	-0.0008	CCD+Clear	163/51	Jaroslav Trnka	Newton 200/1000 CCD ST-9E	
V 829 Her								
54947.42891	0.0010	I	+0.0083	CCD+I	26/13	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7	
54947.43241	0.0005	I	+0.0118	CCD+R	32/18	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7	
			show all					
V 856 Her								
54217.35027	0.0002	I	-0.0022	CCD+R	141/62	Martin Lehky	0.40-m f/5 + CCD ST7 + R	
54924.42543	0.0003	I	+0.0055	CCD+R	107/58	Martin Lehky	0.40-m f/5 + CCD ST7 + R	
54943.38065	0.0003	II	-----	CCD+R	198/102	Martin Lehky	0.40-m f/5 + CCD ST7 + R	
			show all					

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V 865 Her 54206.43199	0.0010	I	+0.1240	CCD+R	459/193	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
V 948 Her 54943.45513	0.0005	I	-0.0128	CCD+R	146/54	Martin Lehky		EQ6 + 2.8/80 Zeiss Biometar lens + CCD ST5C	
V 972 Her 54946.53888	0.0010	II	+0.0923	CCD+R	317/232	Martin Lehky		EQ6 + 2.8/80 Zeiss Biometar lens + CCD ST5C + R	
V1052 Her 54954.46737 54954.46787 54954.46807 54959.47275	0.0004 0.0005 0.0002 0.0003	II II II I	-0.1051 -0.1046 -0.1044 -0.1080	CCD+I CCD+V CCD+R CCD+R	47/17 50/19 51/19 128/47	Hana Kučáková Hana Kučáková Hana Kučáková Hana Kučáková		Newton 200/1200 + SBIG ST8-XME Newton 200/1200 + SBIG ST8-XME Newton 200/1200 + SBIG ST8-XME Newton 200/1200 + SBIG ST8-XME	
			show all						
V1057 Her 54935.51892 54935.51897 54935.52025	0.0008 0.0008 0.0008	II II II	+0.0032 +0.0032 +0.0045	CCD+R CCD+I CCD+V	55/16 56/16 57/16	Luboš Brát Luboš Brát Luboš Brát		RL200, f/6 + ST8, guider RF80/600+G1-0300 RL200, f/6 + ST8, guider RF80/600+G1-0300 RL200, f/6 + ST8, guider RF80/600+G1-0300	
			show all						
V1064 Her 54931.50090 54953.46410	0.0005 0.0003	II II	-0.0008 +0.0007	CCD+R CCD+R	122/70 164/75	Roman Ehrenberger Roman Ehrenberger		RL 96/400 + HX516 + R RL 96/400 + HX516 + R	
			show all						
V1066 Her 54950.58661	0.0011	II	-0.2421	CCD+R	209/184	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
V1068 Her 54950.37176 54950.57018 54954.51231 54954.51346	0.0001 0.0004 0.0005 0.0003	I II II II	+0.0097 +0.0085 +0.0080 +0.0092	CCD+R CCD+R CCD+I CCD+R	203/58 203/168 71/34 67/33	Hana Kučáková Hana Kučáková Radek Dřevěný Radek Dřevěný		Newton 200/1200 + SBIG ST8-XME Newton 200/1200 + SBIG ST8-XME RL 200/660 CCD G2-402, guid. RF 70/500 CCD G1 30 RL 200/660 CCD G2-402, guid. RF 70/500 CCD G1 30	
			show all						
V1069 Her 54926.44751	0.0006	I	-0.1001	CCD+Clear	279/69	Jaroslav Trnka		Newton 200/1000 CCD ST-9E	
V1092 Her 54961.50791 54961.50811	0.0006 0.0005	I I	-0.0104 -0.0102	CCD+I CCD+R	32/15 35/17	Ladislav Šmelcer Ladislav Šmelcer		Celestron 280/1765 + CCD ST7 Celestron 280/1765 + CCD ST7	
			show all						
V1097 Her 54946.39955 54946.39965 54946.40025	0.0006 0.0003 0.0006	I I I	+0.0045 +0.0046 +0.0052	CCD+I CCD+V CCD+R	20/10 17/7 18/7	Ladislav Šmelcer Ladislav Šmelcer Ladislav Šmelcer		Celestron 280/1765 + CCD ST7 Celestron 280/1765 + CCD ST7 Celestron 280/1765 + CCD ST7	
			show all						
G3089.1247 Her 54922.52601 54924.60090 54924.60107 54924.60201 54947.41778 54947.41795 54947.41845	0.0001 0.0006 0.0006 0.0006 0.0004 0.0002 0.0003	I I I I I I I	----- ----- ----- ----- ----- ----- -----	CCD+Clear CCD+V CCD+I CCD+R CCD+Clear CCD+Clear CCD+Clear	131/54 59/44 62/46 59/44 124/58 82/39 67/43	Luboš Brát Luboš Brát Luboš Brát Luboš Brát Jaroslav Trnka Pavel Marek Luboš Brát		RL200, f/6 + ST8, guider RF80/600+G1-0300 RL200, f/6 + ST8, guider RF80/600+G1-0300 RL200, f/6 + ST8, guider RF80/600+G1-0300 RL200, f/6 + ST8, guider RF80/600+G1-0300 Newton 200/1000 CCD ST-9E RL200/800 + G2 (filtr:BVRI) RL200, f/6 + ST8, guider RF80/600+G1-0300	

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G3089.1273 Her							
54922.48711	0.0002	II	-----	CCD+Clear	135/35	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
54924.57410	0.0008	I	-----	CCD+I	56/34	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
54924.57418	0.0013	I	-----	CCD+R	56/34	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
54924.57485	0.0011	I	-----	CCD+V	48/29	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
54947.37834	0.0005	I	-----	CCD+Clear	64/27	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
54947.37844	0.0006	I	-----	CCD+Clear	110/18	Pavel Marek	RL200/800 + G2 (filtr:BVRI)
USNO-B1 1069-0290990 Her							
54937.46394	0.0005	II	-----	CCD+Clear	307/87	Jaroslav Trnka	Newton 200/1000 CCD ST-9E
CU Hya							
54922.36476	0.0004	I	+0.0118	CCD+R	62/30	Martin Lehky	0.40-m f/5 + CCD ST7 + R
CG Lac							
53635.35229	0.0002	I	-0.0004	CCD+R	77/34	Martin Lehky	0.40-m f/5 + CCD ST7 + R
53984.41223	0.0001	I	-0.0002	CCD+R	100/47	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
IP Lac							
54405.27851	0.0001	I	+0.0040	CCD+R	135/75	Martin Lehky	0.40-m f/5 + CCD ST7 + R
OP Lac							
54366.57133	0.0004	I	+0.1465	CCD+R	260/202	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54373.35400	0.0006	I	+0.1432	CCD+R	139/83	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54763.54542	0.0004	I	+0.1429	CCD+R	421/342	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
CzeV137 Lac							
54366.45151	0.0009	I	-----	CCD+R	220/85	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54367.40803	0.0004	II	-----	CCD+R	294/114	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54367.59781	0.0011	I	-----	CCD+R	294/269	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54368.37580	0.0006	I	-----	CCD+R	302/107	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54368.57074	0.0006	II	-----	CCD+R	302/264	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54387.35273	0.0004	I	-----	CCD+R	306/92	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54387.54366	0.0004	II	-----	CCD+R	306/239	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54388.32278	0.0006	II	-----	CCD+R	276/74	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54388.51346	0.0006	I	-----	CCD+R	276/210	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54716.31597	0.0006	II	-----	CCD+R	237/29	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54716.50954	0.0006	I	-----	CCD+R	237/159	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54763.36114	0.0006	I	-----	CCD+R	275/157	Martin Lehky	0.40-m f/5 + CCD ST7 + R
CzeV138 Lac							
54366.57500	0.0004	I	-----	CCD+R	243/195	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54387.58563	0.0005	I	-----	CCD+R	323/281	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54410.24601	0.0010	II	-----	CCD+R	124/49	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54763.56639	0.0011	I	-----	CCD+R	348/320	Martin Lehky	0.40-m f/5 + CCD ST7 + R
CzeV139 Lac							
54367.32377	0.0005	II	-----	CCD+R	319/60	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54373.28107	0.0004	I	-----	CCD+R	139/30	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54388.51409	0.0003	II	-----	CCD+R	283/215	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54716.28176	0.0009	I	-----	CCD+R	227/8	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54763.29337	0.0004	II	-----	CCD+R	184/97	Martin Lehky	0.40-m f/5 + CCD ST7 + R

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CzeV159 Lac 54774.45396	0.0005	II	-----	CCD+Clear	263/166	Jaroslav Trnka	Newton 200/1000+CCD ST-9E
CzeV161 Lac 54709.49001	0.0004	I	-----	CCD+R	173/67	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54719.28275	0.0005	II	-----	CCD+R	314/14	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54719.41156	0.0008	I	-----	CCD+R	314/120	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54719.53595	0.0003	II	-----	CCD+R	314/221	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54830.19715	0.0007	I	-----	CCD+R	141/9	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54830.32474	0.0005	II	-----	CCD+R	141/110	Martin Lehky	0.40-m f/5 + CCD ST7 + R
CzeV171 Lac 54774.34486	0.0005	I	-----	CCD+Clear	258/37	Jaroslav Trnka	Newton 200/1000+CCD ST-9E
RW Leo 54207.40717	0.0001	I	-0.0081	CCD+R	206/137	Martin Lehky	0.40-m f/5 + CCD ST7 + R
VZ Leo 54116.57745	0.0003	I	-0.0058	CCD+R	189/57	Martin Lehky	0.40-m f/5 + CCD ST7 + R
XY Leo 54946.33176	0.0007	II	-0.0087	CCD+V	14/6	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54946.33226	0.0003	II	-0.0082 show all	CCD+I	13/7	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
AP Leo 54946.32205	0.0001	I	+0.0068	CCD+R	51/24	Stanislav Poddaný	Meade LX 200 40,6 cm, SBIG ST10XME
54946.32213	0.0003	I	+0.0069	CCD+I	40/22	Stanislav Poddaný	Meade LX 200 40,6 cm, SBIG ST10XME
54946.32255	0.0003	I	+0.0073 show all	CCD+V	48/22	Stanislav Poddaný	Meade LX 200 40,6 cm, SBIG ST10XME
BL Leo 51957.50784	0.0002	I	-0.0015	CCD+V	34/11	Martin Lehky	0.25-m f/5 + CCD ST5C + V
CE Leo 54943.45597	0.0002	I	-0.0030	CCD+I	63/46	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54943.45657	0.0001	I	-0.0024	CCD+R	61/46	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54959.38608	0.0005	II	-0.0029	CCD+I	34/25	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54959.38668	0.0002	II	-0.0023 show all	CCD+R	32/23	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
FS Leo 54942.44030	0.0010	II	-0.0035	CCD+I	35/18	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
54942.44104	0.0009	II	-0.0028	CCD+V	38/21	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
54942.44115	0.0007	II	-0.0026 show all	CCD+R	40/23	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
GV Leo 54908.45670	0.0001	II	-0.0053	CCD+Clear	79/37	Jaroslav Trnka	Newton 200/1000 CCD ST-9E
54935.39642	0.0001	II	-0.0056 show all	CCD+R	150/104	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
HI Leo 54935.35692	0.0002	II	+0.0006	CCD+R	141/71	Roman Ehrenberger	RL 96/400 + HX516 + R

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RT LMi 54931.36333	0.0006	I	+0.0032	CCD+R	73/39	Roman Ehrenberger		RL 96/400 + HX516 + R	
WZ LMi 54921.55636	0.0003	I	+0.0512	CCD+Clear	296/158	Jaroslav Trnka		Newton 200/1000 CCD ST-9E	
SW Lyn 54928.38807	0.0006	I	+0.0094	CCD+I	44/19	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
54928.38827	0.0003	I	+0.0096	CCD+R	42/19	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
54928.38837	0.0002	I	+0.0097	CCD+V	42/20	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
54929.35398	0.0008	II	+0.0092	CCD+V	31/11	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
54929.35478	0.0008	II	+0.0100	CCD+R	34/12	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
			show all						
AH Lyn 54205.38367	0.0001	I	-0.0000	CCD+R	217/113	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
DY Lyn 54928.34367	0.0003	II	-0.0151	CCD+R	135/59	Roman Ehrenberger		RL 96/400 + HX516 + R	
DZ Lyn 54912.32161	0.0003	I	+0.0015	CCD+R	174/65	Roman Ehrenberger		RL 96/400 + HX516 + R	
54929.33191	0.0003	I	+0.0011	CCD+R	144/63	Roman Ehrenberger		RL 96/400 + HX516 + R	
			show all						
EH Lyn 54935.44443	0.0013	I	+0.0723	CCD+Clear	204/162	Jaroslav Trnka		Newton 200/1000 CCD ST-9E	
GZ Lyr 54212.50720	0.0002	I	+0.0083	CCD+R	302/155	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
IW Lyr 53868.39369	0.0002	I	-0.0004	CCD+R	98/43	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
54172.63280	0.0002	I	+0.0024	CCD+R	90/26	Martin Lehky & Petr Horalek		0.40-m f/5 + CCD ST7 + R	
			show all						
V 412 Lyr 54217.56339	0.0002	I	+0.0036	CCD+R	244/175	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
AO Mon 54815.45932	0.0005	II	-0.0018	CCD+R	100/65	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
V 536 Mon 54843.48611	0.0012	I	+10.3651	CCD+R	164/134	Hana Kučáková		Meade 12'' LX200GPS + SBIG ST8-XME	
V 680 Mon 54843.44810	0.0005	I	-0.0366	CCD+R	91/57	Hana Kučáková		Newton 200/1200 + SBIG ST8-XME	
V 451 Oph 54947.48794	0.0025	I	-0.0058	CCD+I	35/12	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
54947.48994	0.0013	I	-0.0038	CCD+V	31/10	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
54947.49034	0.0007	I	-0.0034	CCD+R	32/12	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
			show all						

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V 508 Oph							
54959.44072	0.0004	I	-0.0053	CCD+V	19/7	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54959.44072	0.0005	I	-0.0053	CCD+R	18/7	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54959.44092	0.0004	I	-0.0051	CCD+I	20/7	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
V 913 Oph							
53866.41699	0.0001	I	-0.0015	CCD+R	299/131	Martin Lehky	0.40-m f/5 + CCD ST7 + R
CQ Ori							
54027.53924	0.0002	I	-0.0000	CCD+R	177/63	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
EF Ori							
53751.41451	0.0003	I	-0.0007	CCD+R	127/64	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V 668 Ori							
54509.35237	0.0002	I	+0.0462	CCD+R	162/96	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V1353 Ori							
51901.44216	0.0004	II	-0.0043	CCD+V	135/49	Martin Lehky	0.25-m f/5 + CCD ST5C + V
52280.49304	0.0010	II	-0.0016	CCD+V	61/53	Martin Lehky	0.62-m f/4.5 + CCD ST8 + V
52280.49349	0.0006	II	-0.0012	CCD+I	64/51	Martin Lehky	0.62-m f/4.5 + CCD ST8 + I
52280.49354	0.0005	II	-0.0011	CCD+R	65/52	Martin Lehky	0.62-m f/4.5 + CCD ST8 + R
52310.43051	0.0020	I	-0.0018	CCD+V	54/40	Martin Lehky	0.25-m f/5 + CCD ST5C + V
52310.43289	0.0004	I	+0.0006	CCD+R	86/58	Martin Lehky	0.25-m f/5 + CCD ST5C + R
52310.43296	0.0006	I	+0.0007	CCD+I	89/60	Martin Lehky	0.25-m f/5 + CCD ST5C + I
52320.33403	0.0005	I	+0.0013	CCD+V	97/23	Martin Lehky	0.25-m f/5 + CCD ST5C + V
52320.33701	0.0010	I	+0.0042	CCD+R	96/25	Martin Lehky	0.25-m f/5 + CCD ST5C + R
52320.33712	0.0010	I	+0.0043	CCD+I	96/24	Martin Lehky	0.25-m f/5 + CCD ST5C + I
52344.37243	0.0010	I	-0.0045	CCD+V	52/33	Martin Lehky	0.25-m f/5 + CCD ST5C + V
52344.37243	0.0010	I	-0.0045	CCD+R	52/32	Martin Lehky	0.25-m f/5 + CCD ST5C + R
52344.37443	0.0010	I	-0.0024	CCD+I	52/33	Martin Lehky	0.25-m f/5 + CCD ST5C + I
52345.31383	0.0010	I	-0.0060	CCD+V	65/18	Martin Lehky	0.25-m f/5 + CCD ST5C + V
52345.31453	0.0007	I	-0.0053	CCD+I	63/18	Martin Lehky	0.25-m f/5 + CCD ST5C + I
52345.31501	0.0008	I	-0.0048	CCD+R	62/17	Martin Lehky	0.25-m f/5 + CCD ST5C + R
			show all				
AY Peg							
54318.40161	0.0001	I	-0.0225	CCD+R	185/97	Martin Lehky	0.40-m f/5 + CCD ST7 + R
BY Peg							
52505.43377	0.0003	I	-0.0222	CCD+I	118/46	Martin Lehky	0.40-m f/5 + CCD ST7 + I
52506.45962	0.0003	I	-0.0222	CCD+I	184/91	Martin Lehky	0.40-m f/5 + CCD ST7 + I
52512.44663	0.0005	II	-0.0191	CCD+I	125/59	Martin Lehky	0.40-m f/5 + CCD ST7 + I
52513.47170	0.0006	II	-0.0198	CCD+I	159/92	Martin Lehky	0.40-m f/5 + CCD ST7 + I
52514.49981	0.0006	II	-0.0175	CCD+R	154/87	Martin Lehky	0.40-m f/5 + CCD ST7 + R
52516.37599	0.0004	I	-0.0219	CCD+R	149/20	Martin Lehky	0.40-m f/5 + CCD ST7 + R
52516.54905	0.0006	II	-0.0199	CCD+R	149/109	Martin Lehky	0.40-m f/5 + CCD ST7 + R
52517.40345	0.0006	I	-0.0203	CCD+R	84/33	Martin Lehky	0.40-m f/5 + CCD ST7 + I
52517.40403	0.0008	I	-0.0197	CCD+I	74/29	Martin Lehky	0.40-m f/5 + CCD ST7 + I
52520.47869	0.0002	I	-0.0224	CCD+V	91/51	Martin Lehky	0.40-m f/5 + CCD ST7 + V
52520.47876	0.0002	I	-0.0224	CCD+R	83/42	Martin Lehky	0.40-m f/5 + CCD ST7 + R
52527.49128	0.0005	II	-0.0196	CCD+V	96/64	Martin Lehky	0.40-m f/5 + CCD ST7 + V
52529.36881	0.0004	I	-0.0227	CCD+V	95/36	Martin Lehky	0.40-m f/5 + CCD ST7 + V
52529.54419	0.0004	II	-0.0183	CCD+V	95/80	Martin Lehky	0.40-m f/5 + CCD ST7 + V

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52553.30554	0.0004	I	-0.0214	CCD+B	53/21	Martin Lehky	0.62-m f/4.5 + CCD ST8 + B
54360.28705	0.0002	II	+0.0008	CCD+R	425/30	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54360.45605	0.0001	I	-0.0011	CCD+R	425/227	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
FL Peg							
54026.31159	0.0005	I	-0.0104	CCD+R	126/65	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
RT Per							
53993.60826	0.0001	I	-0.0017	CCD+R	216/106	Martin Lehky	0.40-m f/5 + CCD ST7 + R
BY Per							
53991.43014	0.0001	I	-0.0020	CCD+R	123/63	Martin Lehky	0.40-m f/5 + CCD ST7 + R
DK Per							
54357.55108	0.0001	I	+0.0017	CCD+R	192/64	Martin Lehky	0.40-m f/5 + CCD ST7 + R
EQ Per							
53636.52710	0.0006	I	-0.0110	CCD+R	124/90	Martin Lehky	0.40-m f/5 + CCD ST7 + R
HK Per							
53985.48101	0.0002	I	+0.0011	CCD+R	136/70	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54831.41279	0.0002	I	+0.0038	CCD+R	109/48	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
IU Per							
54308.54013	0.0001	I	+0.0040	CCD+R	233/163	Martin Lehky	0.40-m f/5 + CCD ST7 + R
KN Per							
54761.32234	0.0010	II	-0.0067	CCD+Clear	250/117	Václav Přibík	Newton 254/1200, CCD G2-1600, EQ6
KW Per							
54835.25076	0.0003	II	-0.0053	CCD+R	119/54	Roman Ehrenberger	RL 96/400 + HX516 + R
PS Per							
53988.57126	0.0001	I	-0.0030	CCD+R	109/43	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54019.46752	0.0001	I	-0.0027	CCD+R	151/102	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
V 450 Per							
53751.24865	0.0004	I	-0.0011	CCD+R	125/94	Martin Lehky	0.40-m f/5 + CCD ST7 + R
53987.46746	0.0003	I	-0.0014	CCD+R	110/40	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54318.56061	0.0002	I	+0.0056	CCD+R	151/96	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				
V 457 Per							
53966.56126	0.0004	I	-0.0016	CCD+R	92/35	Martin Lehky	0.40-m f/5 + CCD ST7 + R
V 462 Per							
54513.31642	0.0002	I	+0.0046	CCD+R	224/120	Martin Lehky	0.40-m f/5 + CCD ST7 + R
CP Psc							
54758.46079	0.0002	I	+0.0014	CCD+R	173/84	Roman Ehrenberger	RL 96/400 + HX516 + R
54843.28046	0.0002	I	+0.0040	CCD+R	273/138	Martin Lehky	0.40-m f/5 + CCD ST7 + R
			show all				

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LX Ser 54218.34361	0.0002	I	-0.0012	CCD+R	100/47	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
UU Sge 54263.48508	0.0004	I	-0.0000	CCD+R	122/34	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
UZ Sge 54713.33249	0.0002	I	+0.0132	CCD+R	52/24	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
54713.33259	0.0002	I	+0.0133	CCD+I	43/20	Ladislav Šmelcer		Celestron 280/1765 + CCD ST7	
			show all						
AL Tau 53637.51399	0.0002	I	-0.0045	CCD+R	111/68	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
54135.41361	0.0003	I	-0.0083	CCD+R	223/116	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
			show all						
AP Tau 53744.25434	0.0004	I	+0.0007	CCD+R	88/50	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
EQ Tau 52219.54854	0.0002	I	-0.0026	CCD+I	341/152	Martin Lehky & Miroslav Broz	0.25-m f/5 + CCD ST5C + I		
52219.54861	0.0002	I	-0.0026	CCD+V	347/167	Martin Lehky & Miroslav Broz	0.25-m f/5 + CCD ST5C + V		
52219.54898	0.0002	I	-0.0022	CCD+R	333/155	Martin Lehky & Miroslav Broz	0.25-m f/5 + CCD ST5C + R		
			show all						
GW Tau 54872.28975	0.0004	II	+0.0006	CCD+R	133/67	Roman Ehrenberger		RL 96/400 + HX516 + R	
V1188 Tau 54765.57610	0.0002	II	+0.0209	CCD+Clear	300/170	Luboš Brát		RL200, f/6 + ST8	
V1234 Tau 54857.44192	0.0003	II	+0.0265	CCD+R	278/219	Hana Kučáková		Meade 12 LX200GPS + SBIG ST8-XME	
RV Tri 53638.53466	0.0001	I	+0.0018	CCD+R	103/61	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
53966.37817	0.0001	I	+0.0015	CCD+R	98/41	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
53996.52483	0.0001	I	+0.0016	CCD+R	176/86	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
53999.53885	0.0001	I	+0.0009	CCD+R	213/151	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
54017.62820	0.0005	I	+0.0024	CCD+R	312/299	Martin Lehky & Petr Horalek		0.40-m f/5 + CCD ST7 + R	
54018.38104	0.0001	I	+0.0015	CCD+R	368/127	Martin Lehky & Petr Horalek		0.40-m f/5 + CCD ST7 + R	
54116.35756	0.0001	I	+0.0017	CCD+R	183/71	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
54718.53211	0.0001	I	-0.0013	CCD+R	215/150	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
54829.32371	0.0001	I	+0.0017	CCD+R	173/25	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
			show all						
RW Tri 53622.53501	0.0000	I	+0.0022	CCD+R	52/25	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
53635.51984	0.0001	I	+0.0016	CCD+R	111/52	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
53984.50395	0.0002	I	+0.0017	CCD+R	77/35	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
53989.60631	0.0001	I	+0.0026	CCD+R	91/46	Martin Lehky		0.40-m f/5 + CCD ST7 + R	
			show all						
VZ Tri 54747.41026	0.0010	I	-0.0090	CCD+Clear	212/101	Václav Přebík		Newton 254/1200, CCD G2-1600, EQ6	
CzeV128 Tri 53966.37311	0.0005	I	-----	CCD+R	84/33	Martin Lehky		0.40-m f/5 + CCD ST7 + R	

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53996.51609	0.0006	I	-----	CCD+R	149/63	Martin Lehky	0.40-m f/5 + CCD ST7 + R
53999.47975	0.0006	I	-----	CCD+R	182/91	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54000.46945	0.0004	I	-----	CCD+R	202/109	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54017.26964	0.0005	I	-----	CCD+R	298/35	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
54017.51668	0.0005	II	-----	CCD+R	298/225	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
54018.25714	0.0005	I	-----	CCD+R	344/23	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
54018.50211	0.0006	II	-----	CCD+R	344/215	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
54116.35475	0.0004	II	-----	CCD+R	170/69	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54718.50947	0.0004	I	-----	CCD+R	225/135	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54829.45161	0.0005	II	-----	CCD+R	158/112	Martin Lehky	0.40-m f/5 + CCD ST7 + R
CzeV130 Tri							
53996.46202	0.0008	I	-----	CCD+R	137/26	Martin Lehky	0.40-m f/5 + CCD ST7 + R
53999.41955	0.0006	I	-----	CCD+R	201/62	Martin Lehky	0.40-m f/5 + CCD ST7 + R
53999.56372	0.0006	II	-----	CCD+R	201/157	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54000.45465	0.0003	II	-----	CCD+R	224/107	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54000.60059	0.0005	I	-----	CCD+R	224/206	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54017.29387	0.0005	II	-----	CCD+R	246/47	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
54017.44879	0.0008	I	-----	CCD+R	246/158	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
54018.33503	0.0006	I	-----	CCD+R	302/79	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
54018.48230	0.0006	II	-----	CCD+R	302/191	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
54018.62974	0.0006	I	-----	CCD+R	302/276	Martin Lehky & Petr Horalek	0.40-m f/5 + CCD ST7 + R
54116.31416	0.0005	II	-----	CCD+R	146/29	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54116.45988	0.0006	I	-----	CCD+R	146/134	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54718.37906	0.0008	II	-----	CCD+R	180/28	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54718.52862	0.0008	I	-----	CCD+R	180/104	Martin Lehky	0.40-m f/5 + CCD ST7 + R
54829.36799	0.0008	I	-----	CCD+R	155/57	Martin Lehky	0.40-m f/5 + CCD ST7 + R
TW UMa							
54216.43240	0.0002	I	-0.0013	CCD+R	407/179	Martin Lehky	0.40-m f/5 + CCD ST7 + R
UX UMa							
54115.65989	0.0001	I	-0.0002	CCD+R	165/58	Martin Lehky	0.40-m f/5 + CCD ST7 + R
VV UMa							
54843.68203	0.0004	II	+0.0131	CCD+R	83/48	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME
54935.44567	0.0003	I	+0.0120	CCD+I	35/19	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54935.44577	0.0003	I	+0.0121	CCD+V	34/18	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
54935.44577	0.0002	I	+0.0121	CCD+R	36/19	Ladislav Šmelcer	Celestron 280/1765 + CCD ST7
			show all				
XZ UMa							
54954.36302	0.0001	I	-0.0077	CCD+Clear	102/34	Jaroslav Trnka	Newton 200/1000 CCD ST-9E
BQ UMa							
54513.56709	0.0001	I	-0.0279	CCD+R	245/129	Martin Lehky	0.40-m f/5 + CCD ST7 + R
ES UMa							
52030.49286	0.0007	I	+0.0011	CCD+V	35/22	Martin Lehky	0.25-m f/5 + CCD ST5C + V
52033.39987	0.0008	II	-0.0007	CCD+V	76/20	Martin Lehky	0.25-m f/5 + CCD ST5C + V
54829.70154	0.0002	I	+0.0014	CCD+R	112/45	Luboš Brát	RL200, f/6 + ST8, guider RF80/600+G1-0300
54831.55310	0.0003	II	+0.0019	CCD+R	135/62	Roman Ehrenberger	RL 96/400 + HX516 + R
54893.43021	0.0011	II	+0.0035	CCD+R	56/33	Hana Kučáková	Newton 200/1200 + SBIG ST8-XME

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54926.48210	0.0001	I	+0.0022 show all	CCD+R	136/67	Hana Kučáková
HV UMa						
54534.49829	0.0007	I	+0.0191	CCD+R	75/32	Petr Svoboda
54932.51880	0.0006	I	+0.0168 show all	CCD+R	152/104	Petr Svoboda
IW UMa						
54843.40577	0.0001	I	+0.0061	CCD+R	275/122	Martin Lehky
MQ UMa						
54912.39396	0.0001	I	-0.0075	CCD+Clear	116/86	Jaroslav Trnka
NU UMa						
54959.35092	0.0001	I	+0.0071	CCD+R	156/96	Hana Kučáková
RU UMi						
54932.33324	0.0003	II	-0.0038	CCD+R	151/68	Roman Ehrenberger
54943.36048	0.0003	II	0.0000 show all	CCD+R	115/53	Roman Ehrenberger
AW Vir						
54934.40475	0.0003	II	+0.0039	CCD+R	37/28	Ladislav Šmelcer
54934.40475	0.0001	II	+0.0039	CCD+I	37/28	Ladislav Šmelcer
54934.40495	0.0001	II	+0.0041 show all	CCD+V	40/28	Ladislav Šmelcer
HT Vir						
54912.45100	0.0007	II	+0.0007	CCD+I	37/15	Ladislav Šmelcer
54912.45220	0.0004	II	+0.0019	CCD+R	33/16	Ladislav Šmelcer
54912.45260	0.0006	II	+0.0023 show all	CCD+V	24/15	Ladislav Šmelcer
HW Vir						
54828.66771	0.0001	II	-0.0002	CCD+Clear	86/21	Luboš Brát
54831.70257	0.0001	II	-0.0001	CCD+Clear	116/78	Luboš Brát
54950.34762	0.0003	I	-0.0008	CCD+I	34/18	Ladislav Šmelcer
54950.34782	0.0003	I	-0.0006	CCD+R	34/18	Ladislav Šmelcer
54953.38248	0.0002	I	-0.0006	CCD+I	43/32	Ladislav Šmelcer
54953.38258	0.0004	I	-0.0005 show all	CCD+R	42/32	Ladislav Šmelcer
PS Vir						
54924.43813	0.0003	I	-0.0021	CCD+R	38/20	Ladislav Šmelcer
54924.43863	0.0006	I	-0.0016 show all	CCD+I	34/23	Ladislav Šmelcer
EV Vul						
52216.24306	0.0007	I	+0.0132	CCD+V	39/16	Martin Lehky
FF Vul						
53866.52978	0.0003	I	-0.0027	CCD+R	75/38	Martin Lehky
53985.33827	0.0001	I	-0.0037 show all	CCD+R	81/35	Martin Lehky

Table 2 – Orbital elements of observed eclipsing binaries adopted from O-C Gateway (Paschke, 2009)

OBJECT	PRIM/SEC	EPOCH [hjd]	PERIOD [days]
AS And	I	52548.5944	2.420602
CN And	I	46711.533	0.4627909
CN And	II	46711.7644	0.4627909
DW And	I	36110.39	0.62872
EP And	I	52137.5296	0.40411058
EP And	II	52137.73166	0.40411058
GZ And	I	41976.695	0.3050179
GZ And	II	41976.8475	0.3050179
HS And	I	46321.634	1.85719
V 404 And	I	50784.5434	0.676034
V 404 And	II	50784.8814	0.676034
V 440 And	I	52900.1019	1.582577
V 440 And	II	52900.8933	1.582577
CzeV041 And	I	53266.3825	0.42418
CzeV041 And	II	53266.59459	0.42418
G2787.1836 And	ELEMENTS UNKNOWN		
V 761 Aql	I	28067.327	1.0693478
V 761 Aql	II	28067.862	1.0693478
V 889 Aql	I	38242.334	11.12077
V 889 Aql	II	38257.419	11.12077
CX Aqr	I	36453.555	0.5559864
CX Aqr	II	36453.833	0.5559864
TX Ari	I	28409.496	2.691321
RY Aur	I	38289.559	2.725397
CG Aur	I	27148.9	1.804855
CG Aur	II	27149.802	1.804855
CL Aur	I	32967.256	1.2443718
CL Aur	II	32967.879	1.2443718
DO Aur	I	25967.346	0.788652
DO Aur	II	25967.74033	0.788652
EP Aur	I	26309.387	0.5910081
EP Aur	II	26309.682	0.5910081
FW Aur	I	29335.274	2.559966
HW Aur	I	29906.442	1.1774199
HW Aur	II	29907.03071	1.1774199
IZ Aur	I	50846.2735	0.771167
IZ Aur	II	50846.65915	0.771167
KO Aur	I	36607.492	3.9537975
KO Aur	II	36609.469	3.9537975
KU Aur	I	29630.469	1.3195785
KU Aur	II	29631.12879	1.3195785
QT Aur	I	49018.379	0.565522
V 364 Aur	I	38849.346	0.699025
V 535 Aur	I	51966.464	0.384758
SY Boo	I	51273.62	0.71449
TZ Boo	I	37378.41	0.29716095
TZ Boo	II	37378.559	0.29716095
XY Boo	I	39953.97	0.370564
XY Boo	II	39954.155	0.370564
ZZ Boo	I	41765.623	4.99177
ZZ Boo	II	41768.11887	4.99177
AC Boo	I	41457.261	0.3524377
AC Boo	II	41457.437	0.3524377
CK Boo	I	42537.433	0.3551537
CK Boo	II	42537.61058	0.3551537
EQ Boo	I	47931.794	5.43536
EQ Boo	II	47933.963	5.43536
EW Boo	I	48500.5158	0.906348
EW Boo	II	48500.9658	0.906348
FY Boo	I	51274.691	0.2411595
FY Boo	II	51274.812	0.2411595
GG Boo	I	51259.8645	0.426942
GG Boo	II	51260.078	0.426942
GH Boo	I	51259.8633	0.659575
GH Boo	II	51260.8551	0.659575
GK Boo	I	51311.7377	0.47778

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GK Boo	II	51311.9766	0.47778
GP Boo	I	51258.8604	0.81877
GP Boo	II	51259.2698	0.81877
GU Boo	I	51275.875	0.48872
GU Boo	II	51276.11936	0.48872
AV Cam	I	26251.41	1.4449135
AV Cam	II	26252.13246	1.4449135
HW Cam	I	50534.641	1.091735
HW Cam	II	50535.187	1.091735
LR Cam	I	51975.604	0.434139
LR Cam	II	51975.82107	0.434139
RZ Cas	I	43200.3263	1.195251
RZ Cas	II	43200.9239	1.195251
ZZ Cas	I	33437.495	1.243527
ZZ Cas	II	33438.1168	1.243527
AB Cas	I	46849.265	1.366888
AB Cas	II	46849.9484	1.366888
AH Cas	I	46299.575	1.402268
AL Cas	I	44490.366	0.50055583
AL Cas	II	44490.61628	0.50055583
BS Cas	I	48562.491	0.440468
BS Cas	II	48562.711	0.440468
DO Cas	I	33926.4573	0.684666
DO Cas	II	33926.7996	0.684666
EP Cas	I	28179.182	0.8134382
EP Cas	II	28179.5887	0.8134382
IS Cas	I	28776.263	1.841517
LU Cas	I	44145.456	2.036985
MV Cas	I	28425.564	1.112253
MV Cas	II	28426.12	1.112253
NV Cas	I	29166.348	0.741521
OQ Cas	I	29106.496	0.7166956
V 336 Cas	I	28428.534	0.5972873
V 336 Cas	II	28428.832	0.5972873
V 368 Cas	I	25554.32	4.451635
V 368 Cas	II	25556.54582	4.451635
V 374 Cas	I	29490.269	1.0448105
V 374 Cas	II	29490.7914	1.0448105
V 375 Cas	I	34642.255	1.473394
V 375 Cas	II	34642.992	1.473394
V 381 Cas	I	44546.29	1.74594
V 381 Cas	II	44547.163	1.74594
V 527 Cas	I	42744.267	4.86027
V 527 Cas	II	42746.6972	4.86027
V 799 Cas	I	48501.312	7.70067
V 799 Cas	II	48505.164	7.70067
V 959 Cas	I	52960.2298	1.06516
V 959 Cas	II	52960.7623	1.06516
CzeV129 Cas	ELEMENTS UNKNOWN		
CzeV135 Cas	ELEMENTS UNKNOWN		
G4297.1664 Cas	I	51473.568	4.15907
G4297.1664 Cas	II	51475.6475	4.15907
SY Cep	I	44107.524	8.34715
SY Cep	II	44103.35	8.34715
BE Cep	I	28751.309	0.4243943
BE Cep	II	28751.5212	0.4243943
CO Cep	I	29043.457	4.13756
CO Cep	II	29045.526	4.13756
DP Cep	I	33622.256	1.269963
DP Cep	II	33622.891	1.269963
EF Cep	I	49221.3122	0.6061084
EF Cep	II	49221.6152	0.6061084
EO Cep	I	27364.395	1.833658
EO Cep	II	27365.312	1.833658
GI Cep	I	36875.355	1.03768
GI Cep	II	36875.874	1.03768
IM Cep	I	29931.265	0.921584
IM Cep	II	29931.726	0.921584
IP Cep	I	29495.471	0.8988975
IP Cep	II	29495.92	0.8988975
OT Cep	I	49169.4362	0.4812313
OT Cep	II	49169.67682	0.4812313
V 338 Cep	I	44114.59	2.104419
V 338 Cep	II	44115.642	2.104419

V 357 Cep	I	46507.463	1.309233
V 357 Cep	II	46508.117	1.309233
V 397 Cep	I	48501.18	2.086835
V 397 Cep	II	48502.223	2.086835
CzeV153 Cep	ELEMENTS UNKNOWN		
CzeV154 Cep	ELEMENTS UNKNOWN		
G4500.730 Cep	ELEMENTS UNKNOWN		
USNO-B1 1690-0011688 Cep	ELEMENTS UNKNOWN		
TV Cet	I	41275.962	9.1032884
TV Cet	II	41280.51364	9.1032884
AC CMi	I	46140.641	0.867217
AC CMi	II	46141.07461	0.867217
AV CMi	I	38379.73	2.277758
AV CMi	II	38378.59	2.277758
EH Cnc	I	45768.626	0.4180364
EH Cnc	II	45768.835	0.4180364
WW Cnc	I	46005.6092	1.115953
WW Cnc	II	46006.16718	1.115953
G0816.1907 Cnc	I	54174.34	0.3158
G0816.1907 Cnc	II	54174.498	0.3158
CM Com	I	37781.36	0.5545055
CM Com	II	37781.637	0.5545055
LR Com	I	49687.296	0.896297
LR Com	II	49687.744	0.896297
TW CrB	I	37898.3681	0.5888745
TW CrB	II	37898.6625	0.5888745
UX CrB	I	51426.704	0.65064
UX CVn	I	41096.183	0.573703
VV CVn	I	35550.28	0.5331303
VV CVn	II	35550.54656	0.5331303
YZ CVn	I	44793.446	1.175557
YZ CVn	II	44794.03378	1.175557
BO CVn	I	48724.4187	0.517462
BO CVn	II	48724.67718	0.517462
CI CVn	I	48500.508	0.815877
CI CVn	II	48500.916	0.815877
DK CVn	I	51286.711	0.494966
DK CVn	II	51251.812	0.494966
DL CVn	I	51304.736	0.64244
DL CVn	II	51305.05722	0.64244
VV Cyg	I	20270.452	1.4770469
VV Cyg	II	20271.19052	1.4770469
DK Cyg	I	42273.462	0.470693
DK Cyg	II	42273.697	0.470693
GV Cyg	I	29495.356	0.990664
GV Cyg	II	29495.85134	0.990664
V 370 Cyg	I	34629.462	0.774543
V 370 Cyg	II	34629.849	0.774543
V 385 Cyg	I	42964.376	1.228037
V 401 Cyg	I	43835.259	0.582725
V 401 Cyg	II	43835.5504	0.582725
V 443 Cyg	I	27298.503	0.831103
V 469 Cyg	I	28814.396	1.31251
V 469 Cyg	II	28815.05226	1.31251
V 478 Cyg	I	41602.724	2.880903
V 478 Cyg	II	41604.16445	2.880903
V 498 Cyg	I	42633.446	3.484867
V 498 Cyg	II	42635.188	3.484867
V 664 Cyg	I	28344.442	1.242052
V 706 Cyg	I	40116.429	0.4662545
V 706 Cyg	II	40116.66213	0.4662545
V 711 Cyg	I	32802.447	0.82671
V 711 Cyg	II	32802.86	0.82671
V 807 Cyg	I	31909.551	0.798763
V 807 Cyg	II	31909.951	0.798763
V 809 Cyg	I	33252.2258	1.964457
V 809 Cyg	II	33253.208	1.964457
V 842 Cyg	I	35391.312	0.8591385
V 842 Cyg	II	35391.74157	0.8591385
V 880 Cyg	I	33857.404	1.0600316

V 880 Cyg	II	33857.934	1.0600316
V 922 Cyg	I	34204.236	1.422371
V 963 Cyg	I	34629.397	1.39466785
V 963 Cyg	II	34630.0943	1.39466785
V1019 Cyg	I	33542.334	2.279325
V1047 Cyg	I	27368.392	0.929659
V1200 Cyg	I	37642.23	0.36906
V1200 Cyg	II	37642.415	0.36906
V1414 Cyg	I	29112.38	1.406254
V1414 Cyg	II	29113.083	1.406254
V1723 Cyg	I	42744.201	0.884045
V1787 Cyg	I	45449.625	0.739503
V1909 Cyg	I	51295.473	3.0947
V2239 Cyg	I	51427.4063	0.610597
V2239 Cyg	II	51427.7116	0.610597
V2311 Cyg	I	51432.431	1.4107
CzeV45 Cyg	ELEMENTS UNKNOWN		
RR Del	I	47050.322	4.599612
WX Dra	I	45171.443	1.8018647
AR Dra	I	42868.9114	0.675838
AR Dra	II	42869.24932	0.675838
AU Dra	I	35699.275	0.5152665
AU Dra	II	35699.533	0.5152665
AX Dra	I	26767.675	0.5681633
AX Dra	II	26767.9591	0.5681633
BL Dra	I	51276.945	0.402656
BL Dra	II	51277.146	0.402656
BV Dra	I	44474.327	0.350067
BV Dra	II	44474.502	0.350067
BW Dra	I	42572.538	0.2921653
BW Dra	II	42572.6841	0.2921653
BX Dra	I	49810.5925	0.579028
BX Dra	II	49810.882	0.579028
CV Dra	I	47305.4392	0.61759874
CV Dra	II	47305.7458	0.61759874
FX Dra	I	48500.705	0.816599
GQ Dra	I	48500.5641	0.765902
GQ Dra	II	48500.94705	0.765902
LN Dra	I	51306.863	0.612142
LN Dra	II	51280.847	0.612142
LZ Dra	I	51470.159	0.350374
LZ Dra	II	51470.33419	0.350374
G4420.1984 Dra	I	51356.754	0.619277
BZ Eri	I	25558.445	0.6641701
BZ Eri	II	25558.77709	0.6641701
RX Gem	I	40555.782	12.2086588
CU Gem	I	28108.44	3.030053
GR Gem	I	28835.62	0.5274471
GV Gem	I	30381.6	1
GW Gem	I	25645.5798	0.6594445
GW Gem	II	25645.9095	0.6594445
HR Gem	I	30319.685	1.068964
HR Gem	II	30320.219	1.068964
MU Gem	I	30328.694	0.7262005
MU Gem	II	30329.057	0.7262005
OR Gem	I	39063.53	0.502921
V 337 Gem	I	48500.8928	1.91869
CzeV176 Gem	ELEMENTS UNKNOWN		
TX Her	I	40008.3643	2.05980944
TX Her	II	40009.3942	2.05980944
CT Her	I	42522.932	1.7863748
CT Her	II	42523.8252	1.7863748
DK Her	I	25730.445	1.942296
FW Her	I	26744.614	0.835414
IK Her	I	27589.433	1.0994258
V 747 Her	I	45229.426	0.898964
V 829 Her	I	47680.895	0.358151
V 829 Her	II	47681.075	0.358151
V 856 Her	I	51275.316	1.2233
V 865 Her	I	42217.42	5.09515
V 948 Her	I	48501.107	1.27521
V 972 Her	I	48500.064	0.443096

V 972 Her	II	48500.286	0.443096
V1052 Her	I	51274.9145	0.37084
V1052 Her	II	51304.7652	0.37084
V1057 Her	I	51295.891	0.943522
V1057 Her	II	51322.77	0.943522
V1064 Her	I	51286.7253	0.343151
V1064 Her	II	51304.7388	0.343151
V1066 Her	I	51312.7161	0.539498
V1066 Her	II	51243.938	0.539498
V1068 Her	I	51275.8589	0.39426
V1068 Her	II	51274.8757	0.39426
V1069 Her	I	51243.9763	0.486662
V1069 Her	II	51311.871	0.486662
V1092 Her	I	52419.125	0.384512
V1097 Her	I	52463.4068	0.360847
V1097 Her	II	52463.58722	0.360847
G3089.1247 Her	ELEMENTS UNKNOWN		
G3089.1273 Her	ELEMENTS UNKNOWN		
USNO-B1 1069-0290990 Her	ELEMENTS UNKNOWN		
CU Hya	I	27155.407	0.7190715
CG Lac	I	29627.255	0.819389
CG Lac	II	29627.6647	0.819389
IP Lac	I	33861.525	0.8520135
IP Lac	II	33861.95101	0.8520135
OP Lac	I	34714.331	3.392972
OP Lac	II	34716.028	3.392972
CzeV137 Lac	ELEMENTS UNKNOWN		
CzeV138 Lac	ELEMENTS UNKNOWN		
CzeV139 Lac	ELEMENTS UNKNOWN		
CzeV159 Lac	ELEMENTS UNKNOWN		
CzeV161 Lac	ELEMENTS UNKNOWN		
CzeV171 Lac	ELEMENTS UNKNOWN		
RW Leo	I	46770.615	1.682534
VZ Leo	I	31164.316	1.089903
VZ Leo	II	31164.861	1.089903
XY Leo	I	45074.475	0.2841029
XY Leo	II	45074.617	0.2841029
AP Leo	I	45441.0533	0.4303555
AP Leo	II	45441.2685	0.4303555
BL Leo	I	44648.756	0.28193
BL Leo	II	44648.897	0.28193
CE Leo	I	47679.6697	0.3034291
CE Leo	II	47679.82141	0.3034291
FS Leo	I	48500.351	0.456967
FS Leo	II	48500.58	0.456967
GV Leo	I	52754.46	0.266733
GV Leo	II	52754.593	0.266733
HI Leo	I	52740.68	0.311589
HI Leo	II	52740.835	0.311589
RT LMi	I	45002.4147	0.3749177
RT LMi	II	45002.6022	0.3749177
WZ LMi	I	52355.9645	0.389131
SW Lyn	I	25643.319	0.6440665
SW Lyn	II	25643.641	0.6440665
AH Lyn	I	40925.4266	0.508207
DY Lyn	I	52704.488	1.31318
DY Lyn	II	52705.145	1.31318
DZ Lyn	I	52722.4734	0.378016
DZ Lyn	II	52722.6624	0.378016
EH Lyn	I	52728.3	0.32678
GZ Lyr	I	38562.423	1.3294322
IW Lyr	I	30104.43	0.7985203
IW Lyr	II	30104.82926	0.7985203
V 412 Lyr	I	38260.393	0.931479
V 412 Lyr	II	38260.859	0.931479
AO Mon	I	40588.3272	1.884763
AO Mon	II	40589.27	1.884763
V 536 Mon	I	54150.351	31.035
V 536 Mon	II	54165.8685	31.035
V 680 Mon	I	52990.717	8.5381

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V 680 Mon	II	52994.986	8.5381
V 451 Oph	I	44834.365	2.19659616
V 451 Oph	II	44835.4633	2.19659616
V 508 Oph	I	45082.543	0.3447917
V 508 Oph	II	45082.7154	0.3447917
V 913 Oph	I	47690.515	1.917387
CQ Ori	I	38455.21	2.74016
EF Ori	I	51568.398	1.619449
EF Ori	II	51569.208	1.619449
V 668 Ori	I	29575.5	2.045599
V1353 Ori	I	50100.2606	0.471453
V1353 Ori	II	50100.496	0.471453
AY Peg	I	27933.387	2.438994
BY Peg	I	45565.529	0.3419357
BY Peg	II	45565.7	0.3419357
FL Peg	I	37137.506	0.474325
FL Peg	II	37137.743	0.474325
RT Per	I	41298.4028	0.849405
RT Per	II	41298.8275	0.849405
BY Per	I	45942.547	1.15264
BY Per	II	45943.123	1.15264
DK Per	I	42492.373	0.898877
DK Per	II	42492.822	0.898877
EQ Per	I	29187.37	1.48582
HK Per	I	42740.494	2.174625
IU Per	I	45240.344	0.857026
IU Per	II	45240.773	0.857026
KN Per	I	36599.031	0.86646
KN Per	II	36599.461	0.86646
KW Per	I	42404.332	0.93126
KW Per	II	42404.7976	0.93126
PS Per	I	24527.25	0.702179
V 450 Per	I	38407.445	0.948671
V 457 Per	I	38667.414	1.170286
V 462 Per	I	40152.367	0.577975
CP Psc	I	48500.4656	0.6840085
CP Psc	II	48500.808	0.6840085
LX Ser	I	44293.024	0.1584325
UU Sge	I	42953.9328	0.46506918
UZ Sge	I	45861.418	2.215745
UZ Sge	II	45862.526	2.215745
AL Tau	I	35130.4018	0.9306606
AP Tau	I	39414.438	0.9719742
AP Tau	II	39414.924	0.9719742
EQ Tau	I	40213.325	0.3413478
EQ Tau	II	40213.4957	0.3413478
GW Tau	I	50812.3971	0.6413225
GW Tau	II	50812.71776	0.6413225
V1188 Tau	I	51401.252	0.57603
V1188 Tau	II	51401.54	0.57603
V1234 Tau	I	52308.291	0.387847
V1234 Tau	II	52308.48493	0.387847
RV Tri	I	43515.318	0.753664
RV Tri	II	43515.695	0.753664
RW Tri	I	43512.6615	0.2318831
VZ Tri	I	45676.354	0.433483
VZ Tri	II	45676.571	0.433483
CzeV128 Tri	ELEMENTS UNKNOWN		
CzeV130 Tri	ELEMENTS UNKNOWN		
TW UMa	I	45447.475	2.16678
UX UMa	I	37432.8204	0.1966713
VV UMa	I	45006.2873	0.687376
VV UMa	II	45006.631	0.687376
XZ UMa	I	40291.552	1.222309
XZ UMa	II	40292.163	1.222309
BQ UMa	I	37972.651	2.321536
BQ UMa	II	37973.812	2.321536

ES UMa	I	49104.3592	0.528851
ES UMa	II	49104.6237	0.528851
HV UMa	I	51346.743	0.710755
HV UMa	II	51347.098	0.710755
IW UMa	I	48691.364	0.774718
IW UMa	II	48691.751	0.774718
MQ UMa	I	51312.8513	0.476068
MQ UMa	II	51313.089	0.476068
NU UMa	I	48058.296	5.50762
RU UMi	I	41596.33	0.524926
RU UMi	II	41596.592	0.524926
AW Vir	I	45022.645	0.3539976
AW Vir	II	45022.822	0.3539976
HT Vir	I	48760.4609	0.407673
HT Vir	II	48760.6647	0.407673
HW Vir	I	45730.556	0.11671953
HW Vir	II	45730.614	0.11671953
PS Vir	I	52425.7329	0.289806
EV Vul	I	42731.135	2.822105
FF Vul	I	35686.45	0.4449795
FF Vul	II	35686.672	0.4449795

Table 3: List of 21 observers and corresponding amounts of obtained minima timings.

#	OBSERVER	minima totals
1	Martin Lehký	246
2	Ladislav Šmelcer	97
3	Hana Kučáková	44
4	Roman Ehrenberger	35
5	Jaroslav Trnka	31
6	Luboš Brát	26
7	Martin Lehký & Petr Horalek	21
8	Radek Dřevěný	9
9	František Lomoz	7
10	Pavel Marek	6
11	Radek Kocián	6
12	Petr Svoboda	5
13	Václav Přibík	4
14	Ľubomír Urbančok	4
15	Martin Lehký & Dalibor Hanžl	3
16	Martin Lehký & Miroslav Brož	3
17	Stanislav Poddaný	3
18	Pavol A. Dubovský	2
19	Robert Uhlář	2
20	Tomáš Kalisch	2
21	O. Macek, M. Exnerová, M. Vitek	1

Table 4: Identification of objects without final designation in GCVS which were mentioned in table 1.

Object	Cross-identification	RA 2000	DE 2000
CzeV041 And	GSC 2791-1524	00 26 48.7	+41 50 04
G2787.1836 And	GSC 2787-1836	00 20 35.14	+40 04 17.4
CzeV129 Cas	USNO-B1.0 1510-0027592	00 47 12.68	+61 02 03.4
CzeV135 Cas	GSC 3682-2051	01 20 23.14	+59 17 16.18

G4297.1664 Cas	GSC 4297-1664	01 34 54.01	+67 38 15.2
CzeV153 Cep	GSC 4479-0391	23 51 13.17	+68 55 26.4
CzeV154 Cep	GSC 4479-0564	23 49 45.727	+69 04 59.08
G4500.730 Cep	GSC 4500-0730	00 28 28.08	+78 57 43.2
USNO-B1 1690-0011688 Cep		02 09 37.79	+79 03 32.5
G0816.1907 Cnc	GSC 0816-1907	08 50 59.86	+13 57 44.7
CzeV045 Cyg	USNO-B1.0 1308-0446111	21 35 30.49	+40 52 45.4
G4420.1984 Dra	GSC 4420-1984	16 55 57.01	+68 11 59.4
CzeV176 Gem	2MASS 06592030+1409103	06 59 20.30	+14 09 10.3
G3089.1247 Her	GSC 3089-1247	17 51 23.47	+37 43 05.3
G3089.1273 Her	GSC 3089-1273	17 52 12.02	+37 39 05.1
USNO-B1 1069-0290990 Her		16 29 22.21	+16 59 38.4
CzeV137 Lac	USNO-B1.0 1454-0411281	22 34 29.34	+55 29 03.0
CzeV138 Lac	USNO-B1.0 1455-0409516	22 34 16.26	+55 34 24.1
CzeV139 Lac	USNO-B1.0 1455-0409575	22 34 21.44	+55 30 13.8
CzeV159 Lac	2MASS 22115481+4739183	22 11 54.81	+47 39 18.3
CzeV161 Lac	USNO-B1.0 1347-0483658	22 27 04.28	+44 45 59.7
CzeV171 Lac	2MASS J22110724+4753396	22 11 07.24	+47 53 39.6
CzeV128 Tri	USNO-B1.0 1270-0034289	02 13 31.95	+37 02 36.5
CzeV130 Tri	USNO-B1.0 1270-0034104	02 13 01.49	+37 03 26.0

Notes on new variables in the main table

- **CzeV129 Cas** – new variable near OQ Cas, VSX J004712.6+610203, $M_{\text{I}} = 2454008.5783 + 0.649435 \times E$ (Lehký, Horálek 2007)
- **CzeV135 Cas** – New variable near BS Cas discovered by Kocián, Hambalek, Šmelcer (see Kocián et al., 2008). $M_{\text{I}} = 2454389.503157 + 0.514270 \times E$, $M_{\text{II}} = 2454500.332011 + 0.514270 \times E$.
- **CzeV153 Cep** – New variable near XY Cep discovered by Brát (Brát et al., 2009), $M_{\text{I}} = 2454585.647383 + 0.333985 \times E$, $M_{\text{II}} = 2454585.48039 + 0.333985 \times E$ (Brát et al., 2008)
- **CzeV154 Cep** – New variable near XY Cep discovered by Brát (Brát et al., 2009). Orbital elements unknown. [See available data.](#)
- **G4500.730 Cep** – New variable discovered by Trnka. Orbital elements unknown.
- **USNO-B1 1690-0011688 Cep** – New variable near V 357 Cep. Orbital elements unknown.
- **CzeV045 Cyg** – New variable near V706 Cyg discovered by Zejda (Brát et al., 2009)
- **CzeV176 Gem** – New variable near MU Gem discovered by Trnka (Brát et al., 2009). $M_0 = 2454834.5908 + 0.47999 \times E$, [See available data.](#)
- **G3089.1247 Her** – New variable near transiting exoplanet TrES-3 b. Discovered by Akerlof et al., 2000. Per = 0.29636499d.
- **G3089.1273 Her** – New variable near transiting exoplanet TrES-3 b. Discovered by Akerlof et al., 2000, Per = 0.32130000d.
- **USNO-B1 1069-0290990 Her** - New variable near V 699 Her discovered by Trnka. Orbital elements unknown.

- **CzeV137 Lac** – New variable discovered by Lehký. Min I = HJD 2454387.35273 + 0.387182 x E, VSX J223429.3+552903. (Lehký, 2009).
- **CzeV138 Lac** – New variable discovered by Lehký. Min I = HJD 2454387.58563 + 1.1058 x E, VSX J223416.2+553424, (Lehký, 2009).
- **CzeV139 Lac** – New variable discovered by Lehký. Min I = HJD 2454373.28108 + 1.32435 x E, VSX J223421.4+553013, (Lehký, 2009).
- **CzeV159 Lac** – New variable near GO Lac discovered by Trnka. Low mass eclipsing binary, EA type with orbital elements $M_I = 2454705.581810 + 0.359625x E$, $M_{II} = 2454705.761623 + 0.359625x E$ (Trnka, 2008).
- **CzeV161 Lac** – New variable discovered by Lehký in 2008 (Brát et al., 2009). VSX J222704.2+444559
- **CzeV171 Lac** – New variable discovered by Trnka in 2008 (Brát et al., 2009).
- **CzeV128 Tri** – New variable discovered by Lehký and Horálek near RV Tri. VSX J021331.9+370236, Min I = HJD 2454000.4696 + 0.494291 x E. (Lehký, Horálek, 2007)
- **CzeV130 Tri** – New variable discovered by Lehký and Horálek near RV Tri. VSX J021301.4+370326, Min I = HJD 2453999.4197 + 0.295569 x E. (Lehký, Horálek, 2007)

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