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**164. LIST OF TIMINGS OF MINIMA ECLIPSING BINARIES  
BY BBSAG OBSERVERS**

(BBSAG Bulletin No. 131)

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The following Table lists 217 timings of minima of eclipsing binaries secured by CCD observations by BBSAG observers, primarily obtained between July 2004 and June 2005. The given O–C values generally refer to the linear elements of the GCVS (Kholopov et al., 1985), except for the cases stated in the remarks. All times given are heliocentric UTC.

Variable	Type	HJD 24. . .	$\pm$	$O - C$	n	Obs	Remarks*
AS And	p	53381.289	0.004		14	RD	V; GCVS elements in error
	p	53410.3288	0.0018		14	RD	V
BL And	p	53267.542	0.005	-0.005	130	APs	
FK And	p	53381.3059	0.0009	-0.0121	16	RD	V
NSV223	s	53324.4191	0.0003	+0.0066	14	RD	V; 2451422.749 + 0.30944 $\times$ E
WZ Ant	p	53129.369		-0.001	160	FH, RDr	2434419.295 + 0.4459239 $\times$ E
AF Aps	s?	53114.449	0.001	+0.002	480	FH, RDr	2436690.399 + 0.797613 $\times$ E
BH Aps	p	53200.5328	0.0015	+0.0050	523	FH, RDr	2436728.435 + 3.650732 $\times$ E
BV Aps	p	53215.427	0.002	+0.005	480	FH, RDr	2436809.413 + 1.646859 $\times$ E
RY Aur	p	53388.2581	0.0003	+0.0290	21	EBl	
ZZ Aur	p	53388.2739	0.0004	+0.0139	22	EBl	
	p	53406.3111	0.0006	+0.0146	19	EBl	
	p	53409.3169	0.0002	+0.0143	39	EBl	
	s	53409.6199	0.0019	+0.0167	25	EBl	
	s	53411.4207	0.0004	+0.0139	37	EBl	
	s	53440.2808	0.0013	+0.0156	17	EBl	
	p	53440.5816	0.0010	+0.0158	23	EBl	
	p	53445.3899	0.0004	+0.0144	41	EBl	
CG Aur	p	53384.2750	0.0011	+0.0027	18	EBl	
	s	53384.2769	0.0012	+0.1044	18	EBl	
DO Aur	p	53409.274	0.005	+0.063	15	EBl	
EI Aur	p	53388.232	0.004	-0.142	10	EBl	
EP Aur	p	53385.2383	0.0006	+0.0155	12	EBl	IBVS No. 4099
GX Aur	p	53462.386	0.005	+0.027	11	RD	V; BAV Mitt. 69

Variable	Type	HJD 24. . .	$\pm$	$O - C$	n	Obs	Remarks*
HL Aur	p	53388.2803	0.0003	-0.0051	19	EB1	AJ 113, 2270
	p	53462.3595	0.0004	-0.0041	19	RD	V
HP Aur	s	53462.3529	0.0019	+0.0475	19	RD	V
IZ Aur	s	53409.2504	0.0015	-0.0062	13	EB1	IBVS No. 4586
KU Aur	p	53409.2722	0.0002	+0.0042	21	EB1	
V364 Aur	p	53409.3387	0.0005	-0.0158	15	RD	V; MVS 10, 153 and RD
V404 Aur	p	53381.3212	0.0008		14	RD	V; period needs refinement
V410 Aur	s	53409.2969	0.0010	-0.0182	25	RD	V; Hipparcos
GSC2915:212		53388.2872	0.0005		22	EB1	new variable
TU Boo	s	53502.3585	0.0014	+0.0034	9	EB1	
	p	53502.5222	0.0007	+0.0049	17	EB1	
TZ Boo	p	53165.531	0.005	+0.080	97	APs	
UW Boo	p	53463.5577	0.0005	-0.0070	24	RD	V
VW Boo	s	53502.4782	0.0008	-0.0101	13	EB1	MNRAS 246, 47
XY Boo	p	53515.4774	0.0008	+0.0343	17	EB1	AJ 76, 923
AC Boo	p	53502.4873	0.0016	+0.0806	15	EB1	
AD Boo	p	53463.5256	0.0013	-0.0196	19	RD	V; Chin. AA 6, 366
AQ Boo	s	53515.4450	0.0017	-0.0102	15	EB1	IBVS No. 4871
AR Boo	s	53515.5263	0.0010	+0.0184	16	EB1	IBVS No. 4601
GM Boo	p	53445.5102	0.0009	+0.0201	12	EB1	IBVS No. 5125
GN Boo	s	53445.4658	0.0010	+0.0099	18	EB1	IBVS No. 5125
GQ Boo	s	53445.510	0.002	+0.004	10	EB1	IBVS No. 5125
GR Boo	s	53445.4471	0.0010	+0.0020	16	EB1	IBVS No. 5125
AS Cam	p	53410.294	0.002	-0.028	11	RD	V
CD Cam	s?	53409.349	0.003	-0.065	13	RD	V; IBVS No. 3753
DF CVn	s	53464.3901	0.0014	+0.0311	14	EB1	IBVS No. 5021
DH CVn	p	53464.3920	0.0015	-0.0036	14	EB1	IBVS No. 5149
GSC2004:784	p	53463.3392		+0.0022	10	EB1	IBVS No. 5269
GSC2533:1519	s	53464.4104		-0.0007	10	EB1	IBVS No. 5541
GSC2534:216	s	53464.3316		-0.0021	8	EB1	IBVS No. 5403
	s	53491.3842	0.0018	-0.0039	10	DH	
	p	53491.5071	0.0009	-0.0039	19	DH	
GSC2536:122	s	53491.4508	0.0014	-0.0025	15	DH	IBVS No. 5403
	p	53491.5918	0.0010	-0.0019	17	DH	
GSC2537:520	p	53464.307	0.002	+0.007	6	EB1	IBVS No. 5541
GSC2544:1007	s	53464.443	0.002	0.000	6	EB1	IBVS No. 5541
GSC2548:936	s	53491.4147	0.0012	-0.0023	15	DH	IBVS No. 5403
	p	53491.5455	0.0009	-0.0019	18	DH	
GSC3022:996	p	53491.4630	0.0011	+0.0006	13	DH	IBVS No. 5403
GSC3026:1046	s	53463.4401		+0.009	17	EB1	IBVS No. 5269
RS CMi	p	53350.49	0.01	-0.04	20	APs	BBSAG Bull. 112, 11
TY CMi	p	53462.3580	0.0010	-0.5359	22	RD	V
AP CMi	p	53351.561	0.004	-0.046	79	APs	BBSAG Bull. 95
BB CMi	p	53353.575	0.010	+0.093	205	APs	AJ 109, 1239
GSC181:2426	p	53400.416	0.003		123	APs	2451514.059 + 1.053831 $\times$ E
BH Cas	p	53353.3128	0.0009	+0.0140	18	EB1	
CV Cas	p	53341.3013	0.0007	+0.5831	27	RD	V
CW Cas	p	53353.2800	0.0010	-0.0305	17	EB1	JAAVSO 21, 34
EI Cas	p	53410.3041	0.0014	+0.0818	14	RD	V
EP Cas	p	53283.5132	0.0004	-0.0356	35	RD	
GR Cas	p	53324.3860	0.0002	-0.0389	12	RD	V
GU Cas	p	53341.2757	0.0015	-0.3024	24	RD	V
KL Cas	p	53283.5153	0.0003	-0.0117	32	RD	
	s	53353.2697	0.0013	-0.0089	12	EB1	
MT Cas	s	53353.3663	0.0007	+0.0089	18	EB1	
NU Cas	p	53353.362	0.003	+0.222	23	EB1	
OR Cas	s	53283.5110	0.0004	-0.0184	27	RD	
	s	53353.2694	0.0010	-0.0199	14	EB1	
PV Cas	s	53302.5354	0.0005	-0.0037	34	RD	displ. secondary

Variable	Type	HJD 24. . .	$\pm$	$O - C$	n	Obs	Remarks*
V350 Cas	p	53266.5608	0.0020	-0.0226	14	RD	
V359 Cas	p	53283.5076	0.0005	-0.0096	32	RD	IBVS No. 5016
V537 Cas	p	53353.3716	0.0010	+0.0085	21	EB1	priv. comm. F. Agerer
WW Cep	p	53283.3085	0.0003	+0.0014	13	RD	IBVS No. 4131
GG Cep	p	53266.5256	0.0017	-0.0532	21	RD	
GI Cep	p	53341.2753	0.0002	-0.0694	26	RD	V
LP Cep	p	53266.5529	0.0015	+0.0033	15	RD	IBVS No. 4829
OT Cep	p	53324.3860	0.0010	-0.0012	10	RD	V; IBVS No. 5212
BN Cir	p	53542.463	0.003	+0.014	350	FH	IBVS No. 5542
	s	53543.457	0.003	-1.197	420	FH	displ. secondary
LO Com	p	53464.444	0.003	+0.005	6	EB1	
LP Com	s	53464.3749	0.0014	-0.0048	9	EB1	IBVS No. 5052
GSC1996:437	p	53463.325	0.003	-0.015	8	EB1	IBVS No. 5269
GSC2040:1361	s	53216.4331	0.0007	-0.0006	16	EB1	IBVS No. 5295
	s	53541.4673	0.0008	-0.0004	25	EB1	
GSC2579:1125	s	53216.4409	0.0017	-0.0008	15	EB1	IBVS No. 5295
	p	53541.5235	0.0005	-0.0001	13	EB1	
GSC2580:2086	s	53216.4754	0.0009	-0.0056	16	EB1	IBVS No. 5295
	p	53541.4651	0.0006	-0.0054	20	EB1	
V635 Cyg	p	53266.296	0.005	-0.038	8	RD	
V1066 Cyg	p	53283.307	0.004	+0.077	15	RD	
V2280 Cyg	p	53233.3768	0.0006	+0.0302	19	EB1	IBVS No. 4996
V2282 Cyg	p	53233.3799	0.0008	-0.0237	20	EB1	IBVS No. 4996
V2284 Cyg	s	53233.4137	0.0007	+0.0020	18	EB1	IBVS No. 4985
V2294 Cyg	p	53233.443	0.004		9	EB1	IBVS No. 4995
	s	53251.3485	0.0014		20	EB1	
BE Dra	p	53463.5588	0.0004	+0.1229	22	RD	V
KK Dra	p	53463.5651	0.0005	+0.0091	20	RD	V
GSC3549:929	p	53236.4084		-0.0120	13	EB1	IBVS No. 5232
	s	53540.438	0.003	-0.018	10	EB1	
GSC3888:464	p	53236.4381		+0.0029	13	EB1	IBVS No. 5505
RZ Equ	p	53280.300	0.002	-0.016	9	RD	BBSAG Bull. 110, 9
AA Eri	p	49288.474	0.010	+0.021	6	APs	2452143.776 + 0.500846 $\times$ E
	p	53350.314	0.004	0.000	39	APs	
U Gem	p	52286.309	0.002	+0.018	50	RDr	
AF Gem	p	53385.2428	0.0005	-0.0681	15	EB1	
AI Gem	s	53385.234	0.002	-0.238	6	EB1	
AV Gem	s	53385.295	0.002	-0.057	19	EB1	
BS Gem	p	53410.38	0.01	-0.52	6	RD	V
EY Gem	p	53385.2967	0.0009	-0.2082	21	EB1	
GP Gem	s	53385.251	0.003	+0.066	8	EB1	
HR Gem	s	53385.2491	0.0016	+0.0120	15	EB1	
	p	53409.3031	0.0003	+0.143	25	RD	V
KQ Gem	s	53409.2772	0.0005	-0.0773	16	RD	V
V412 Her	p	53463.617	0.004	-0.003	10	RD	V
V490 Her	p	53463.601	0.006	+0.336	8	RD	V
V842 Her	p	53463.5780	0.0005	+0.0644	20	RD	V
V1033 Her	p	53216.4240	0.0017	-0.0091	13	EB1	IBVS No. 5146
	s	53216.5722	0.0004	-0.0100	14	EB1	
V1036 Her	s	53216.4838	0.0008	+0.0013	15	EB1	IBVS No. 5146
V1038 Her	s	53216.4435	0.0017	+0.0019	15	EB1	IBVS No. 5146
	p	53216.5782	0.0013	+0.0025	12	EB1	
V1039 Her	p	53236.3893	0.0010	+0.0010	14	EB1	BBSAG Bull. 128, 10
GSC1537:1557	p	53236.4161	0.0005	+0.0004	19	EB1	IBVS No. 5505
GSC1549:121	p	53250.4161	0.0008	+0.0011	25	EB1	IBVS No. 5505

Variable	Type	HJD 24. . .	$\pm$	$O - C$	n	Obs	Remarks*		
GSC3097:1297	p	53121.5543	0.0006	-0.0004	27	EBI	IBVS No. 5699		
	p	53143.4064	0.0010	+0.0002	10	EBI			
	p	53150.4440	0.0010	+0.0008	18	EBI			
	p	53154.5175	0.0005	+0.0003	24	EBI			
	p	53173.4054	0.0006	-0.0004	21	EBI			
	p	53203.4050	0.0005	-0.0004	15	EBI			
	s	53229.5160	0.0005	-0.0001	25	EBI			
	p	53250.4417	0.0007	-0.0002	26	EBI			
	GSC3101:547	p	53121.5467	0.0005	-0.0002	27		EBI	IBVS No. 5699
p		53143.3703	0.0019	+0.0004	8	EBI			
p		53150.3981	0.0006	+0.0004	12	EBI			
s		53150.5821	0.0015	-0.0005	10	EBI			
p		53154.4662	0.0005	-0.0002	24	EBI			
s		53173.5150	0.0003	-0.0002	21	EBI			
s		53203.4748	0.0005	-0.0008	17	EBI			
s		53229.3671	0.0025	-0.0002	11	EBI			
p		53229.5524	0.0010	+0.0002	23	EBI			
s		53250.4519	0.0008	+0.0014	25	EBI			
GSC3106:1368		s	53150.5167	0.0011	+0.0049	18	EBI	IBVS No. 5699	
	s	53154.4579	0.0017	+0.0037	20	EBI			
	s	53173.4518	0.0005	+0.0028	22	EBI			
	s	53229.356	0.002	-0.003	8	EBI			
	p	53229.5364	0.0015	-0.0022	21	EBI			
	p	53250.3218	0.0007	-0.0039	10	EBI			
	s	53250.5045	0.0010	-0.0004	17	EBI			
	GSC3510:5	p	53121.620	0.004	+0.003	9	EBI		IBVS No. 5699
s		53143.4439	0.0011	-0.0004	12	EBI			
s		53150.4239	0.0010	-0.0050	16	EBI			
p		53154.4476	0.0012	+0.0028	14	EBI			
s		53173.4762	0.0015	-0.0020	21	EBI			
s		53229.353	0.003	-0.002	8	EBI			
p		53229.5333	0.0012	+0.0035	26	EBI			
p		53250.4850	0.0012	+0.0014	24	EBI			
AG Lac		p	53343.243	0.003	-0.363	9	EBI		
EK Lac		p	53341.2685	0.0002	-0.0039	26	RD	V	
EL Lac	p	53343.2715	0.0014	+0.1237	12	EBI			
HX Lac	p	53343.294	0.005	-0.040	11	EBI			
IM Lac	p	53302.2982	0.0010	-0.1690	16	RD			
PP Lac	s	53343.2520	0.0008	-0.0476	10	EBI			
V344 Lac	s	53343.282	0.002	+0.013	12	EBI	BBSAG Bull. 127, 10		
AL Leo	p	53400.578	0.007	+0.012	130	APs	IBVS No. 3401		
LZ Lyr	p	53190.481	0.005	+0.263	76	APs			
V512 Lyr	p	53266.332	0.003	-0.067	15	RD	MVS 12, 156		
GSC2632:319	p	53236.3646	0.0005	+0.0013	20	EBI	IBVS No. 5232		
	p	53540.4725	0.0019	+0.0011	15	EBI			
GSC3104:1384	p	53540.4431	0.0006	+0.0008	11	EBI	IBVS No. 5232		
GSC3540:85	p	53540.400	0.002	+0.001	10	EBI	IBVS No. 5232		
V496 Oph	p	52821.340	0.007	-0.009	223	APs	25442.427 + 2.57587 $\times$ E (T. Berthold)		
V511 Oph	p	52819.519	0.003	-0.039	174	APs	R		
V1016 Oph	p	53165.434	0.005	+0.123	23	APs	BBSAG Bull. 99, 9		
GSC995:1646	p	53250.3326	0.0011	+0.0024	17	EBI	IBVS No. 5505		
V641 Ori	s	53410.357	0.002	+0.032	14	RD	V		
V645 Ori	p	53410.3032	0.0018	+0.0472	11	RD	V		
ZZ Peg	p	53341.3349	0.0017	+0.1273	15	EBI	IBVS No. 4916		
BO Peg	p	53341.3049	0.0006	-0.0253	23	EBI			
BX Peg	p	53341.2285	0.0004	-0.0730	13	EBI			
BY Peg	s	53341.3101	0.0006	-0.0308	21	EBI			
CE Peg	p	53341.3138	0.0008	-0.1996	19	EBI			
	p	53341.317	0.005	-0.196	13	RD	V		

Variable	Type	HJD 24. . .	$\pm$	$O - C$	n	Obs	Remarks*
DZ Per	p	53302.514	0.003	-0.005	25	RD	
EQ Per	p	53266.5498	0.0011	+0.4670	17	RD	
II Per	p	53302.4799	0.0004	-0.0584	26	RD	
PS Per	p	53302.5428	0.0010	+0.0588	18	RD	
QT Per	s	53410.364	0.003	-0.040	12	RD	V
V450 Per	p	53302.5235	0.0010	+0.0726	20	RD	
Y Psc		53302.3456	0.0015	+0.0030	13	RD	
CX Ser	s	53447.530	0.008	-0.082	57	APs	
GSC2035:175	s	53216.3884	0.0004	+0.0005	12	EBI	IBVS No. 5295
	p	53541.4207	0.0008	+0.0051	15	EBI	
WY Tau	p	53384.2470	0.0002	+0.0527	16	EBI	
CR Tau	p	53384.229	0.004	0.000	11	EBI	IBVS No. 4778
ES Tau	p	53406.3856	0.0008	+0.0143	23	EBI	
IV Tau	p	53381.2911	0.0015	+0.0017	12	RD	V
V781 Tau	s	53384.2515	0.0012	-0.0437	19	EBI	
V1112 Tau	p	53381.359	0.005		11	RD	V
HW Vir	s	53548.3716	0.0010	+0.0021	18	EBI	A&A 364, 199
	p	53548.4308	0.0004	+0.0030	20	EBI	
CS Vul	p	53283.3085	0.0005	+0.0248	16	RD	

\* Filter (if used) and source of elements. The elements explicitly given in the Remarks are the first elements of the corresponding binary.

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EBI : E. Blättler Wald, Switzerland  
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DH : D. Häuptli Jona, Switzerland  
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APs : A. Paschke Rüti, Switzerland

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