Recent Minima of 184 Eclipsing Binary Stars

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Abstract   This paper continues the publication of times of minima for eclipsing binary stars from observations reported to the AAVSO Eclipsing Binary Committee. Times of minima from observations made from March 2008 through August 2008 are presented.

1. Recent Observations

The accompanying list contains times of minima calculated from recent CCD observations made by participants in the AAVSO's eclipsing binary program. This list will be web-archived and made available through the AAVSO   ftp site at ftp://ftp.aavso.org/public/datasets/jsamo2j362.txt. This list, along with eclipsing binary data from earlier AAVSO publications, is also included in the Lichtenknecker database administrated by the Bundesdeutsche Arbeitsgemeinschaft für Veränderliche Sterne e.V. (BAV) at http://www.bav-astro.de/LkDB/index.php?lang=en. These observations were reduced by the observers or the writer using the method of Kwee and Van Worden (1956). The standard error is included when available.

The linear elements in the *General Catalog of Variable Stars* (GCVS; Kholopov *et al.* 1985) were used to compute the O–C values for most stars. For a few exceptions where the GCVS elements are missing or are in significant error, light elements from another source are used: CD Cam (Baldwin and Samolyk 2007), CW Cas (Samolyk 1992a), DV Cep (Frank and Lichtenknecker 1987), Z Dra (Danielkiewicz-Krośniak and Kurpińska-Winiarska 1996), DF Hya (Samolyk 1992b), DK Hya (Samolyk 1990), EF Ori (Baldwin and Samolyk 2005), GU Ori (Samolyk 1985). O–C values listed in this paper can be directly compared with values published in recent numbers of the AAVSO *Observed Minima Timingsof Eclipsing Binaries* series.

The number of observations used for determination of each time of minimum is given under *N* in the table when available.

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Table 1. Times of minima of stars in the AAVSO eclipsing binary program.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
RT And	54641.8533	21465	−0.0077	70	CCD	G. Samolyk	0.0001
RT And	54653.8019	21484	−0.0088	65	CCD	G. Samolyk	0.0001
RT And	54709.7774	21573	−0.0080	74	CCD	G. Samolyk	0.0001
WZ And	54702.7051	19881	0.0464	106	CCD	G. Samolyk	0.0002
XZ And	54708.8488	22642	0.1688	74	CCD	G. Samolyk	0.0001
AB And	54674.7747	55937.5	−0.0217	65	CCD	G. Samolyk	0.0001
AB And	54676.7659	55943.5	−0.0219	81	CCD	K. Menzies	0.0001
AB And	54701.8228	56019	−0.0228	41	CCD	K. Menzies	0.0001
AD And	54688.8274	15906	−0.0546	78	CCD	G. Samolyk	0.0002
BD And	54596.8802	42416	0.0162	52	CCD	G. Samolyk	0.0002
BD And	54680.6656	42597	0.0163	75	CCD	G. Samolyk	0.0003
BX And	54652.8182	29706	−0.0458	72	CCD	G. Samolyk	0.0003
BX And	54710.7780	29801	−0.0469	87	CCD	G. Samolyk	0.0003
DS And	54710.6894	18375	0.0018	117	CCD	G. Samolyk	0.0004
RY Aqr	54688.8141	7050	−0.0876	84	CCD	G. Samolyk	0.0001
CX Aqr	54688.7983	32798	0.0079	65	CCD	G. Samolyk	0.0001
CZ Aqr	54702.8390	13134	−0.0410	71	CCD	G. Samolyk	0.0001
XZ Aql	54631.7393	5950	0.1514	90	CCD	G. Samolyk	0.0003
KP Aql	54630.8161	4227	−0.0113	80	CCD	J. Bialozynski	0.0002
OO Aql	54596.8635	31539	0.0394	80	CCD	G. Samolyk	0.0001

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
OO Aql	54639.6886	31623.5	0.0409	80	CCD	K. Menzies	0.0002
OO Aql	54668.8275	31681	0.0395	50	CCD	R. Sabo	0.0003
OO Aql	54681.7517	31706.5	0.0406	62	CCD	G. Samolyk	0.0003
V343 Aql	54660.7082	14213	–0.0512	90	CCD	G. Samolyk	0.0001
V346 Aql	54653.7185	11511	–0.0100	96	CCD	G. Samolyk	0.0001
SS Air	54681.8308	38556.5	–0.2564	70	CCD	G. Samolyk	0.0004
SX Aur	54535.6795	11878	0.0114	80	CCD	J. Bialozynski	0.0003
WW Aur	54554.6564	8558	0.0026	64	CCD	G. Samolyk	0.0004
AP Aur	54527.5996	21223.5	1.1868	45	CCD	K. Menzies	0.0002
AP Aur	54540.6960	21246.5	1.1890	80	CCD	J. Bialozynski	0.0002
AP Aur	54562.6155	21285	1.1899	79	CCD	G. Samolyk	0.0003
CL Aur	54554.6225	17348	0.1252	63	CCD	G. Samolyk	0.0002
EP Aur	54537.7096	47763	0.0125	60	CCD	J. Bialozynski	0.0002
SS Boo	54212.4147	4406	5.6417	170	CCD	J. Bialozynski	0.0003
SS Boo	54592.6845	4456	5.7549	158	CCD	S. Diesso	0.0007
TU Boo	54556.7644	66270	–0.1258	60	CCD	J. Bialozynski	0.0001
TU Boo	54562.7650	66288.5	–0.1245	63	CCD	G. Samolyk	0.0002
TU Boo	54563.7380	66291.5	–0.1244	64	CCD	J. Bialozynski	0.0003
TU Boo	54583.6791	66353	–0.1269	102	CCD	G. Samolyk	0.0002
TY Boo	54533.7584	63230	0.0843	54	CCD	G. Samolyk	0.0003

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
TY Boo	54556.7534	63302.5	0.0861	60	CCD	J. Bialozynski	0.0004
TY Boo	54579.7451	63375	0.0846	59	CCD	J. Bialozynski	0.0001
TY Boo	54583.7102	63387.5	0.0854	92	CCD	G. Samolyk	0.0001
TY Boo	54592.7481	63416	0.0846	68	CCD	K. Menzies	0.0001
TY Boo	54611.6206	63475.5	0.0868	26	CCD	R. Crumrine	0.0005
TY Boo	54615.7429	63488.5	0.0861	53	CCD	K. Menzies	0.0001
TY Boo	54616.6945	63491.5	0.0863	60	CCD	K. Menzies	0.0002
TY Boo	54643.6522	63576.5	0.0865	55	CCD	K. Menzies	0.0003
TZ Boo	54540.7879	50167.5	0.0715	89	CCD	G. Samolyk	0.0001
TZ Boo	54561.7378	50238	0.0714	62	CCD	J. Bialozynski	0.0005
TZ Boo	54568.7231	50261.5	0.0734	60	CCD	J. Bialozynski	0.0002
TZ Boo	54575.7043	50285	0.0713	69	CCD	K. Menzies	0.0002
TZ Boo	54615.6752	50419.5	0.0739	69	CCD	K. Menzies	0.0001
TZ Boo	54619.6842	50433	0.0713	77	CCD	K. Menzies	0.0002
UW Boo	54554.6720	12093	–0.0087	70	CCD	G. Samolyk	0.0004
UW Boo	54561.7068	12100	–0.0069	65	CCD	J. Bialozynski	0.0002
VW Boo	54560.7435	68319.5	–0.1558	59	CCD	J. Bialozynski	0.0002
VW Boo	54565.7080	68334	–0.1551	60	CCD	J. Bialozynski	0.0004
VW Boo	54612.6061	68471	–0.1555	91	CCD	K. Menzies	0.0002
AD Boo	54580.6816	12709	0.0262	124	CCD	G. Samolyk	0.0005

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
AD Boo	54580.6830	12709	0.0276	74	CCD	J. Bialozynski	0.0002
AD Boo	54581.7177	12710	0.0279	80	CCD	J. Bialozynski	0.0003
Y Cam	54561.6996	3509	0.3360	143	CCD	G. Samolyk	0.0001
Y Cam	54670.7915	3542	0.3423	147	CCD	G. Samolyk	0.0003
SV Cam	54562.8172	20180	0.0504	85	CCD	G. Samolyk	0.0002
SV Cam	54657.7097	20340	0.0517	65	CCD	G. Samolyk	0.0005
SV Cam	54696.8518	20406	0.0512	98	CCD	G. Samolyk	0.0002
AL Cam	54610.6785	21229	–0.0332	91	CCD	G. Samolyk	0.0001
CD Cam	54554.7151	2345	0.0046	100	CCD	J. Bialozynski	0.0005
CD Cam	54559.6809	2351.5	0.0032	90	CCD	J. Bialozynski	0.0009
R CMa	54535.6289	9020	0.0846	70	CCD	J. Bialozynski	0.0007
RT CMa	54540.5867	21577	–0.6787	79	CCD	G. Samolyk	0.0002
SX CMa	54554.6019	16290	0.0329	62	CCD	G. Samolyk	0.0004
TZ CMa	54538.6765	14342	–0.1530	80	CCD	J. Bialozynski	0.0004
XZ CMi	54534.5671	20888	–0.0074	78	CCD	G. Samolyk	0.0002
AK CMi	54561.6455	20251	–0.0168	103	CCD	G. Samolyk	0.0003
RW Cap	53268.9041	3126	–0.4141	118	CCD	G. Samolyk	0.0003
RW Cap	53672.5688	3245	–0.4505	82	CCD	G. Samolyk	0.0002
RW Cap	54296.7400	3429	–0.4893	95	CCD	G. Samolyk	0.0003
TY Cap	54680.7973	6946	0.0630	86	CCD	G. Samolyk	0.0004

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
TV Cas	54705.8385	5574	–0.0228	147	CCD	G. Samolyk	0.0003
AB Cas	54562.6194	8668	0.0946	78	CCD	G. Samolyk	0.0001
AB Cas	54652.8344	8734	0.0959	73	CCD	G. Samolyk	0.0003
AB Cas	54708.8772	8775	0.0969	93	CCD	G. Samolyk	0.0001
CW Cas	54660.7675	40859.5	–0.0452	87	CCD	G. Samolyk	0.0002
CW Cas	54681.8114	40925.5	–0.0463	57	CCD	G. Samolyk	0.0003
CW Cas	54705.7267	41000.5	–0.0458	102	CCD	K. Menzies	0.0001
DZ Cas	54653.6849	33405	–0.1750	81	CCD	G. Samolyk	0.0006
IR Cas	54653.8386	18055	0.0097	72	CCD	G. Samolyk	0.0001
MM Cas	54680.8302	16642	0.0895	88	CCD	G. Samolyk	0.0002
MM Cas	54694.7319	16654	0.0895	146	CCD	C. Hesseltine	0.0002
OR Cas	54681.8187	8406	–0.0220	63	CCD	G. Samolyk	0.0002
PV Cas	54710.7589	8274	–0.0331	89	CCD	G. Samolyk	0.0002
V364 Cas	54674.7716	13182.5	–0.0203	85	CCD	G. Samolyk	0.0008
V375 Cas	54696.6222	13611	0.1334	45	CCD	G. Samolyk	0.0007
V380 Cas	54674.7954	21388	–0.0645	87	CCD	G. Samolyk	0.0004
SU Cep	54616.8451	31386	0.0052	80	CCD	J. Bialozynski	0.0001
SU Cep	54653.8024	31427	0.0050	80	CCD	G. Samolyk	0.0001
SU Cep	54700.6754	31479	0.0052	40	CCD	K. Menzies	0.0004
WZ Cep	54583.8498	63585	–0.0801	63	CCD	G. Samolyk	0.0003

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
WZ Cep	54628.7261	63692.5	–0.0793	60	CCD	J. Bialozynski	0.0007
WZ Cep	54635.8208	63709.5	–0.0812	60	CCD	J. Bialozynski	0.0003
WZ Cep	54651.6853	63747.5	–0.0797	78	CCD	G. Samolyk	0.0003
WZ Cep	54702.8179	63870	–0.0844	84	CCD	G. Samolyk	0.0002
XX Cep	54623.8303	4186	–0.0210	80	CCD	J. Bialozynski	0.0002
XX Cep	54705.6379	4221	–0.0199	77	CCD	G. Samolyk	0.0001
ZZ Cep	54623.8311	12464	–0.0151	100	CCD	J. Bialozynski	0.0007
DK Cep	54631.8095	21342	0.0321	70	CCD	G. Samolyk	0.0002
DK Cep	54635.7535	21346	0.0325	90	CCD	J. Bialozynski	0.0002
DL Cep	54596.7026	12665	0.0527	125	CCD	G. Samolyk	0.0003
DL Cep	54622.7902	12681	0.0526	100	CCD	J. Bialozynski	0.0004
DL Cep	54702.6836	12730	0.0525	95	CCD	G. Samolyk	0.0003
DV Cep	54607.8409	6751	–0.0040	80	CCD	J. Bialozynski	0.0001
DV Cep	54649.6718	6787	–0.0042	100	CCD	G. Samolyk	0.0002
DV Cep	54700.7995	6831	–0.0034	77	CCD	K. Menzies	0.0003
EG Cep	54632.7176	22104	0.0142	100	CCD	G. Samolyk	0.0001
EK Cep	54632.8419	3530	0.0100	107	CCD	J. Bialozynski	0.0002
EK Cep	54641.6975	3532	0.0100	82	CCD	G. Samolyk	0.0002
TT Cet	54708.7894	45607	–0.0587	96	CCD	G. Samolyk	0.0002
TW Cet	54702.8526	38912.5	–0.0250	78	CCD	G. Samolyk	0.0002

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
RW Com	54570.7514	61296	–0.0192	60	CCD	J. Bialozynski	0.0001
RW Com	54573.5995	61308	–0.0192	75	CCD	K. Menzies	0.0001
RW Com	54597.6892	61409.5	–0.0201	35	CCD	K. Menzies	0.0001
RW Com	54620.7115	61506.5	–0.0204	60	CCD	J. Bialozynski	0.0002
RZ Com	54527.6806	58168	0.0415	47	CCD	K. Menzies	0.0001
RZ Com	54540.7133	58206.5	0.0417	83	CCD	G. Samolyk	0.0002
RZ Com	54555.7770	58251	0.0419	59	CCD	J. Bialozynski	0.0001
RZ Com	54580.6577	58324.5	0.0424	55	CCD	J. Bialozynski	0.0002
RZ Com	54628.7257	58466.5	0.0425	60	CCD	J. Bialozynski	0.0002
SS Com	54555.7638	71592	0.6561	80	CCD	J. Bialozynski	0.0004
SS Com	54561.7491	71606.5	0.6559	76	CCD	G. Samolyk	0.0003
SS Com	54566.7022	71618.5	0.6555	74	CCD	J. Bialozynski	0.0004
SS Com	54576.6105	71642.5	0.6568	73	CCD	K. Menzies	0.0006
SS Com	54610.6679	71725	0.6589	77	CCD	G. Samolyk	0.0004
CC Com	54534.6056	67974.5	–0.0169	55	CCD	G. Samolyk	0.0002
CC Com	54615.5974	68341.5	–0.0170	39	CCD	K. Menzies	0.0001
U CrB	54573.8567	10957	0.1149	100	CCD	J. Bialozynski	0.0003
U CrB	54580.7619	10959	0.1157	115	CCD	G. Samolyk	0.0004
RW CrB	54573.8819	19028	–0.0044	80	CCD	J. Bialozynski	0.0002
RW CrB	54624.7302	19098	–0.0049	71	CCD	G. Samolyk	0.0003

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
RW CrB	54680.6646	19175	−0.0042	94	CCD	G. Samolyk	0.0002
W Crv	54540.7717	38376	0.0158	80	CCD	G. Samolyk	0.0001
W Crv	54554.7430	38412	0.0162	92	CCD	G. Samolyk	0.0002
W Crv	54567.7469	38445.5	0.0194	79	CCD	J. Bialozynski	0.0002
W Crv	54569.6873	38450.5	0.0193	75	CCD	J. Bialozynski	0.0002
RV Crv	54561.6827	18109.5	−0.0632	103	CCD	G. Samolyk	0.0007
RV Crv	54571.7654	18123	−0.0684	75	CCD	J. Bialozynski	0.0002
RV Crv	54611.7413	18176.5	−0.0705	78	CCD	J. Bialozynski	0.0007
V Crt	54557.6985	18746	−0.0025	80	CCD	J. Bialozynski	0.0001
V Crt	54583.6744	18783	−0.0020	87	CCD	G. Samolyk	0.0003
Y Cyg	54648.6687	15083.5	0.0637	91	CCD	G. Samolyk	0.0006
Y Cyg	54651.6665	15084.5	0.0652	62	CCD	G. Samolyk	0.0005
WW Cyg	54617.8251	4292	0.0746	95	CCD	J. Bialozynski	0.0001
WW Cyg	54637.7322	4298	0.0750	90	CCD	K. Menzies	0.0001
WW Cyg	54710.7234	4320	0.0753	94	CCD	G. Samolyk	0.0001
ZZ Cyg	54618.7645	15301	−0.0526	80	CCD	K. Menzies	0.0001
ZZ Cyg	54618.7646	15301	−0.0525	80	CCD	J. Bialozynski	0.0001
ZZ Cyg	54652.7093	15355	−0.0531	71	CCD	G. Samolyk	0.0002
AE Cyg	54635.7264	10369	−0.0045	60	CCD	K. Menzies	0.0002
CG Cyg	54621.7967	24078	0.0616	60	CCD	J. Bialozynski	0.0002

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
CG Cyg	54638.8373	24105	0.0614	77	CCD	E. Wiley	0.0002
CG Cyg	54676.7052	24165	0.0608	25	CCD	K. Menzies	0.0006
DK Cyg	54642.8110	35359	0.0800	93	CCD	K. Menzies	0.0003
DK Cyg	54643.7535	35361	0.0812	76	CCD	K. Menzies	0.0006
DK Cyg	54652.6944	35380	0.0789	72	CCD	G. Samolyk	0.0002
DK Cyg	54681.8799	35442	0.0816	50	CCD	G. Samolyk	0.0006
KR Cyg	54614.7946	30182	0.0130	80	CCD	J. Bialozynski	0.0002
KR Cyg	54653.6721	30228	0.0135	79	CCD	G. Samolyk	0.0002
KR Cyg	54702.6904	30286	0.0130	106	CCD	K. Menzies	0.0001
KV Cyg	54641.7976	8867	0.0523	98	CCD	J. Bialozynski	0.0003
MY Cyg	54698.6114	5206	−0.0007	262	CCD	K. Menzies	0.0002
MY Cyg	54702.6188	5207	0.0015	90	CCD	G. Samolyk	0.0003
V387 Cyg	54613.7906	41568	0.0184	60	CCD	J. Bialozynski	0.0001
V387 Cyg	54674.6474	41663	0.0186	72	CCD	G. Samolyk	0.0003
V387 Cyg	54681.6931	41674	0.0177	80	CCD	G. Samolyk	0.0002
V388 Cyg	54619.7630	14745	−0.0778	90	CCD	K. Menzies	0.0002
V388 Cyg	54619.7671	14745	−0.0737	50	CCD	J. Bialozynski	0.001
V388 Cyg	54649.8306	14780	−0.0765	94	CCD	G. Samolyk	0.0002
V388 Cyg	54650.6872	14781	−0.0790	95	CCD	K. Menzies	0.0001
V401 Cyg	54612.7643	18495	0.0619	78	CCD	J. Bialozynski	0.0004

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
V401 Cyg	54703.6687	18651	0.0617	61	CCD	K. Menzies	0.0003
V456 Cyg	54613.8058	10887	0.0433	60	CCD	J. Bialozynski	0.0002
V466 Cyg	54617.8683	18571.5	0.0059	75	CCD	J. Bialozynski	0.0001
V466 Cyg	54631.7834	18581.5	0.0054	80	CCD	J. Bialozynski	0.0002
V466 Cyg	54688.8375	18622.5	0.0053	70	CCD	G. Samolyk	0.0001
V477 Cyg	54703.7643	4480	–0.0175	26	CCD	R. Sabo	0.0001
V548 Cyg	54612.7561	5626	0.0194	75	CCD	J. Bialozynski	0.0003
V704 Cyg	54630.8199	29247	0.0310	24	CCD	K. Menzies	0.0003
V704 Cyg	54630.8203	29247	0.0314	80	CCD	J. Bialozynski	0.0004
V704 Cyg	54701.5877	29371	0.0315	70	CCD	K. Menzies	0.0002
V704 Cyg	54705.5820	29378	0.0309	77	CCD	K. Menzies	0.0001
V1034 Cyg	54611.8027	11949	–0.0048	61	CCD	K. Menzies	0.0004
V1034 Cyg	54702.6566	12042	–0.0055	112	CCD	G. Samolyk	0.0003
W Del	54651.7480	2356	0.0269	118	CCD	G. Samolyk	0.0002
TY Del	54652.7909	9817	0.0532	73	CCD	G. Samolyk	0.0002
YY Del	54610.8408	14691	0.0113	67	CCD	G. Samolyk	0.0002
YY Del	54637.8058	14725	0.0112	80	CCD	J. Bialozynski	0.0001
Z Dra	54615.7556	3515	–0.0319	80	CCD	J. Bialozynski	0.0001
RZ Dra	54606.7443	18932	0.0460	60	CCD	J. Bialozynski	0.0001
RZ Dra	54660.7287	19030	0.0448	102	CCD	G. Samolyk	0.0002

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
RZ Dra	54709.7581	19119	0.0464	72	CCD	G. Samolyk	0.0002
TW Dra	54622.7107	3736	0.0353	90	CCD	J. Bialozynski	0.0002
TW Dra	54636.7442	3741	0.0346	154	CCD	G. Samolyk	0.0001
TW Dra	54681.6530	3757	0.0338	105	CCD	G. Samolyk	0.0002
UZ Dra	54600.8200	3995.5	0.0033	42	CCD	K. Menzies	0.0004
UZ Dra	54613.8642	3999.5	0.0023	98	CCD	K. Menzies	0.0002
UZ Dra	54618.7594	4001	0.0055	100	CCD	J. Bialozynski	0.0001
BH Dra	54626.7592	8038	−0.0026	100	CCD	J. Bialozynski	0.0003
RX Her	54621.7598	12061	0.0001	98	CCD	J. Bialozynski	0.0007
RX Her	54678.6730	12093	−0.0010	132	CCD	G. Samolyk	0.0003
RX Her	54703.5726	12107	−0.0014	209	CCD	K. Menzies	0.0001
SZ Her	54562.8069	15522	−0.0198	66	CCD	G. Samolyk	0.0001
SZ Her	54573.4414	15535	−0.0205		CCD	J. Virtanen	0.0001
SZ Her	54589.8040	15555	−0.0199	79	CCD	J. Bialozynski	0.0001
SZ Her	54616.8016	15588	−0.0196	57	CCD	E. Wiley	0.0001
TT Her	54592.7991	16004	0.0354	80	CCD	J. Bialozynski	0.0003
TT Her	54708.6334	16131	0.0362	81	CCD	G. Samolyk	0.0001
TU Her	54627.7704	4661	−0.1809	100	CCD	J. Bialozynski	0.0001
TU Her	54652.7066	4672	−0.1817	125	CCD	G. Samolyk	0.0001
TU Her	54702.5792	4694	−0.1831	35	CCD	K. Menzies	0.0002

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
UX Her	54615.7325	9648	0.0694	95	CCD	J. Bialozynski	0.0002
UX Her	54629.6719	9657	0.0692	105	CCD	K. Menzies	0.0001
UX Her	54663.7475	9679	0.0701	134	CCD	G. Samolyk	0.0001
CC Her	54627.7862	8627	0.1762	80	CCD	J. Bialozynski	0.0001
CC Her	54653.7968	8642	0.1767	56	CCD	G. Samolyk	0.0002
CT Her	54607.7618	6765	0.0043	79	CCD	J. Bialozynski	0.0003
CT Her	54641.7016	6784	0.0030	130	CCD	G. Samolyk	0.0002
WY Hya	54527.7585	19492.5	0.0263	60	CCD	J. Bialozynski	0.0001
WY Hya	54532.7702	19499.5	0.0260	60	CCD	J. Bialozynski	0.0002
WY Hya	54540.6464	19510.5	0.0261	65	CCD	R. Poklar	0.0002
AV Hya	54530.6917	26130	–0.0883	72	CCD	J. Bialozynski	0.0005
DF Hya	54532.6783	35525.5	–0.0141	75	CCD	R. Poklar	0.0001
DF Hya	54545.5721	35564.5	–0.0139	66	CCD	G. Samolyk	0.0001
DF Hya	54552.6809	35586	–0.0131	79	CCD	J. Bialozynski	0.0001
DF Hya	54566.7304	35628.5	–0.0144	77	CCD	J. Bialozynski	0.0005
DI Hya	54531.6923	37965	–0.0253	79	CCD	J. Bialozynski	0.0001
DK Hya	54533.7043	22398	0.0065	98	CCD	G. Samolyk	0.0002
DK Hya	54544.6642	22419	0.0060	73	CCD	R. Poklar	0.0002
DK Hya	54544.6648	22419	0.0066	75	CCD	J. Bialozynski	0.0002
SW Lac	54639.8156	29198.5	–0.1013	118	CCD	K. Menzies	0.0003

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
SW Lac	54676.6986	29313.5	–0.1012	80	CCD	G. Samolyk	0.0002
SW Lac	54703.7992	29398	–0.1015	144	CCD	K. Menzies	0.0001
VX Lac	54681.8447	8770	0.0646	51	CCD	G. Samolyk	0.0002
VX Lac	54707.6330	8794	0.0650	90	CCD	K. Menzies	0.0001
CM Lac	54652.6832	17216	–0.0034	85	CCD	G. Samolyk	0.0002
CO Lac	54680.7854	17602.5	0.0051	90	CCD	G. Samolyk	0.0006
DG Lac	54674.6726	4607	–0.2165	68	CCD	G. Samolyk	0.0004
Y Leo	54534.6425	5396	–0.0149	57	CCD	G. Samolyk	0.0001
UU Leo	54533.7225	5439	0.1557	73	CCD	G. Samolyk	0.0003
UV Leo	54583.6381	26901	0.0311	94	CCD	G. Samolyk	0.0001
UV Leo	54631.6446	26981	0.0308	51	CCD	G. Samolyk	0.0003
VZ Leo	54529.6543	21438	–0.0665	80	CCD	J. Bialozynski	0.0002
VZ Leo	54590.6862	21494	–0.0694	89	CCD	G. Samolyk	0.0003
T LMi	54562.6170	3035	–0.1020	88	CCD	H. Gerner	0.0002
T LMi	54574.6994	3039	–0.0991	105	CCD	J. Bialozynski	0.0002
T LMi	54583.7589	3042	–0.0993	88	CCD	G. Samolyk	0.0002
Z Lep	54545.6061	27293	–0.1684	75	CCD	G. Samolyk	0.0002
SS Lib	54583.8077	9338	0.1196	100	CCD	G. Samolyk	0.0005
SS Lib	54596.7495	9347	0.1194	108	CCD	J. Bialozynski	0.0002
UZ Lyr	54596.8841	5767	–0.0271	78	CCD	G. Samolyk	0.0004

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
UZ Lyr	54632.8188	5786	–0.0265	99	CCD	J. Bialozynski	0.0002
EW Lyr	54590.7758	14415	0.2368	72	CCD	G. Samolyk	0.0001
EW Lyr	54629.7502	14435	0.2367	100	CCD	J. Bialozynski	0.0001
EW Lyr	54631.6992	14436	0.2370	77	CCD	G. Samolyk	0.0001
EW Lyr	54709.6483	14476	0.2372	88	CCD	G. Samolyk	0.0001
FL Lyr	54583.8446	7512	–0.0038	83	CCD	G. Samolyk	0.0002
FL Lyr	54594.7376	7517	–0.0015	74	CCD	J. Bialozynski	0.0002
FL Lyr	54642.6572	7539	–0.0013	108	CCD	K. Menzies	0.0001
RU Mon	54527.6998	3566.5	–0.5022	100	CCD	J. Bialozynski	0.0003
RU Mon	54540.6754	3570	–0.0732	103	CCD	G. Samolyk	0.0002
RW Mon	54540.6771	10944	–0.0650	116	CCD	G. Samolyk	0.0001
BB Mon	54533.6384	38013	–0.0039	97	CCD	G. Samolyk	0.0002
EP Mon	54532.5803	18852	0.0363	97	CCD	G. Samolyk	0.0002
SX Oph	54653.6476	10301	–0.0018	74	CCD	G. Samolyk	0.0003
V508 Oph	54569.8276	27516	–0.0156	50	CCD	J. Bialozynski	0.0001
V508 Oph	54674.6431	27820	–0.0169	75	CCD	G. Samolyk	0.0003
V839 Oph	54616.8510	34641.5	0.2267	60	CCD	J. Bialozynski	0.0003
V839 Oph	54620.7381	34651	0.2284	60	CCD	J. Bialozynski	0.0002
V839 Oph	54681.6768	34800	0.2268	82	CCD	G. Samolyk	0.0002
V1010 Oph	54610.8047	23696	–0.1179	72	CCD	G. Samolyk	0.0007

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
V1010 Oph	54614.7722	23702	−0.1189	80	CCD	J. Bialozynski	0.0012
FL Ori	54499.7789	5901	0.0350	65	CCD	J. Bialozynski	0.0001
FZ Ori	54531.6460	26269	−0.0603	58	CCD	J. Bialozynski	0.0003
GU Ori	54526.7072	24341	−0.0420	80	CCD	J. Bialozynski	0.0003
U Peg	54706.8073	48549	−0.1250	121	CCD	K. Menzies	0.0001
TY Peg	54709.7014	4611	−0.3090	149	CCD	G. Samolyk	0.0001
BB Peg	54631.8082	30062	−0.0013	64	CCD	G. Samolyk	0.0001
BB Peg	54658.7402	30136.5	−0.0012	91	CCD	K. Menzies	0.0001
BB Peg	54678.8041	30192	−0.0007	80	CCD	G. Samolyk	0.0001
BB Peg	54710.6143	30280	−0.0027	65	CCD	G. Samolyk	0.0003
BG Peg	54698.6872	4695	−1.8512	76	CCD	K. Menzies	0.0007
BX Peg	54650.7799	37285	−0.0868	61	CCD	K. Menzies	0.0001
BX Peg	54702.6579	37470	−0.0866	95	CCD	G. Samolyk	0.0001
DI Peg	54710.6180	13366	−0.0133	83	CCD	G. Samolyk	0.0001
GP Peg	54702.7852	13801	−0.0454	86	CCD	G. Samolyk	0.0002
GP Peg	54706.6890	13805	−0.0441	120	CCD	K. Menzies	0.0001
KW Peg	52240.5777	5000	0.0902	30	CCD	S. Dvorak	0.0003
KW Peg	52602.653	5443.5	0.099	20	CCD	G. Samolyk	0.005
KW Peg	52920.640	5833	0.105	25	CCD	R. Poklar	0.001
KW Peg	53589.6806	6652.5	0.1185	52	CCD	G. Samolyk	0.0007

Table continued on following pages

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
RT Per	54534.6799	24910	0.0596	70	CCD	J. Bialozynski	0.0001
RT Per	54674.8325	25075	0.0612	62	CCD	G. Samolyk	0.0002
RT Per	54702.8629	25108	0.0614	70	CCD	G. Samolyk	0.0001
IU Per	54553.6441	10434	0.0082	55	CCD	J. Bialozynski	0.0004
KW Per	54657.8475	13158	0.0117	71	CCD	G. Samolyk	0.0002
KW Per	54698.8224	13202	0.0112	75	CCD	K. Menzies	0.0001
Y Psc	54676.8459	2401	–0.0017	74	CCD	G. Samolyk	0.0002
AV Pup	54127.7825	41251	0.1155	44	CCD	J. Bialozynski	0.0003
AV Pup	54526.6873	41968	0.1253	73	CCD	R. Poklar	0.0001
AV Pup	54526.6874	41968	0.1254	60	CCD	J. Bialozynski	0.0002
AV Pup	54545.6101	42002	0.1326	56	CCD	G. Samolyk	0.0002
U Sge	54641.7524	11096	–0.0111	100	CCD	J. Bialozynski	0.0004
U Sge	54668.7974	11104	–0.0110	158	CCD	G. Samolyk	0.0001
V505 Sgr	54688.6435	8646	–0.0547	106	CCD	G. Samolyk	0.0002
V1968 Sgr	54590.8583	29774	–0.0132	77	CCD	G. Samolyk	0.0005
V1968 Sgr	54651.6890	29882	–0.0135	108	CCD	G. Samolyk	0.0005
AO Ser	54574.7651	23246	–0.0097	90	CCD	J. Bialozynski	0.0001
AO Ser	54610.8172	23287	–0.0109	83	CCD	G. Samolyk	0.0002
CC Ser	54554.7977	33085.5	0.9046	61	CCD	G. Samolyk	0.0005
CC Ser	54590.6582	33155	0.9026	83	CCD	G. Samolyk	0.0005

Table continued on following pages

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
RZ Tau	54529.7351	40544	0.0531	59	CCD	J. Bialozynski	0.0002
TY Tau	54533.5631	30947	0.2474	76	CCD	G. Samolyk	0.0002
WY Tau	54537.6920	24735	0.0550	80	CCD	J. Bialozynski	0.0002
EQ Tau	54708.8335	42465.5	–0.0254	75	CCD	G. Samolyk	0.0002
V Tri	54707.7832	51663	–0.0039	104	CCD	K. Menzies	0.0001
X Tri	54680.8430	12535	–0.0717	73	CCD	G. Samolyk	0.0001
W UMa	54547.6861	26322	–0.0584	91	CCD	K. Menzies	0.0001
TX UMa	54558.6990	3121	0.1851	109	CCD	J. Bialozynski	0.0003
TY UMa	54547.6370	42350.5	0.2535	32	CCD	K. Menzies	0.0003
TY UMa	54552.7789	42365	0.2546	60	CCD	J. Bialozynski	0.0001
TY UMa	54553.6647	42367.5	0.2541	55	CCD	J. Bialozynski	0.0001
TY UMa	54561.8173	42390.5	0.2523	87	CCD	G. Samolyk	0.0004
TY UMa	54574.5829	42426.5	0.2545	50	CCD	K. Menzies	0.0001
TY UMa	54600.6427	42500	0.2557	82	CCD	K. Menzies	0.0005
TY UMa	54620.6744	42556.5	0.2560	53	CCD	K. Menzies	0.0002
TY UMa	54681.6542	42728.5	0.2551	52	CCD	G. Samolyk	0.0006
UX UMa	54519.4264	86879	0.0019	83	CCD	J. Virtanen	0.0001
UX UMa	54534.5701	86956	0.0019	48	CCD	G. Samolyk	0.0001
UX UMa	54545.5835	87012	0.0017	40	CCD	G. Samolyk	0.0001
UX UMa	54558.7606	87079	0.0018	12	CCD	J. Bialozynski	0.0002

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
UX UMa	54659.6532	87592	0.0020	56	CCD	G. Samolyk	0.0001
VV UMa	54527.8287	12675	–0.0493	76	CCD	K. Menzies	0.0001
VV UMa	54536.7646	12688	–0.0493	60	CCD	J. Bialozynski	0.0002
VV UMa	54547.7630	12704	–0.0490	57	CCD	K. Menzies	0.0001
XZ UMa	54631.6740	6924	–0.0957	64	CCD	G. Samolyk	0.0002
ZZ UMa	54538.7003	8084	–0.0015	80	CCD	J. Bialozynski	0.0002
ZZ UMa	54554.7948	8091	–0.0019	80	CCD	G. Samolyk	0.0002
RU UMi	54596.6423	24766	–0.0160	83	CCD	G. Samolyk	0.0002
VV Vir	54590.6641	52382	–0.0378	78	CCD	G. Samolyk	0.0001
VV Vir	54606.7243	52418	–0.0385	76	CCD	J. Bialozynski	0.0003
AG Vir	54592.7499	14254	–0.0085	80	CCD	J. Bialozynski	0.0009
AH Vir	54562.6381	21466.5	0.2036	115	CCD	G. Samolyk	0.0002
AH Vir	54588.7201	21530.5	0.2042	80	CCD	J. Bialozynski	0.0004
AH Vir	54598.7035	21555	0.2033	70	CCD	J. Bialozynski	0.0011
AK Vir	54588.7297	10064	–0.0496	80	CCD	J. Bialozynski	0.0001
AW Vir	54561.8213	26947	0.0205	89	CCD	G. Samolyk	0.0001
AW Vir	54596.6912	27045.5	0.0217	51	CCD	G. Samolyk	0.0003
AW Vir	54597.7531	27048.5	0.0216	60	CCD	J. Bialozynski	0.0003
AZ Vir	54554.7638	30252.5	–0.0199	94	CCD	G. Samolyk	0.0002
AZ Vir	54554.7638	30252.5	–0.0199	94	CCD	J. Bialozynski	0.0002

Table 1. Times of minima of stars in the AAVSO eclipsing binary program, cont.

Star	HJD(min) 2400000+	Cycle	O–C	N	Type	Observer	Standard Error
AZ Vir	54610.7099	30412.5	–0.0203	77	CCD	G. Samolyk	0.0002
BH Vir	54577.7653	13891	–0.0072	85	CCD	J. Bialozynski	0.0002
BH Vir	54590.8350	13907	–0.0075	88	CCD	G. Samolyk	0.0001
Z Vul	54674.6895	4777	–0.0079	78	CCD	G. Samolyk	0.0001
AW Vul	54684.6440	10415	–0.0124	93	CCD	G. Samolyk	0.0003
AW Vul	54688.6765	10420	–0.0122	88	CCD	G. Samolyk	0.0001
AX Vul	54596.8826	4812	–0.0307	74	CCD	G. Samolyk	0.0005
BE Vul	54672.7225	9382	0.0647	136	CCD	G. Samolyk	0.0001
BO Vul	54708.6609	9620	–0.0299	97	CCD	G. Samolyk	0.0001
BS Vul	54596.8208	23794	–0.0224	87	CCD	G. Samolyk	0.0002
BS Vul	54637.7543	23880	–0.0224	60	CCD	J. Bialozynski	0.0001
BS Vul	54688.6830	23987	–0.0227	68	CCD	G. Samolyk	0.0001
BS Vul	54709.6259	24031	–0.0225	68	CCD	G. Samolyk	0.0001
BT Vul	54674.7683	16888	0.0027	67	CCD	G. Samolyk	0.0002
BU Vul	54630.8214	37078	0.0159	60	CCD	E. Wiley	0.0002
CD Vul	54636.7753	12195	0.0000	80	CCD	J. Bialozynski	0.0002
CD Vul	54651.8182	12217	0.0005	63	CCD	G. Samolyk	0.0003