

Recent Minima of 242 Eclipsing Binary Stars

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Abstract This paper continues the publication of times of minima for eclipsing binary stars from CCD observations reported to the AAVSO Eclipsing Binary section. Times of minima from observations received from September 2018 through January 2019 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/gsamj471eb242.txt>. This list, along with the 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. Column F indicates the filter used. A "C" indicates a clear filter.

The linear elements in the *General Catalogue 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), AC CMi (Samolyk 2008), 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), and GU Ori (Samolyk 1985).

The light elements used for QX And, V463 And, V599 Aur, DU Boo, HH Boo, AH Cnc, CZ CMi, V776 Cas, YY CrB, V772 Her, DE Lyn, BR Per, HX UMa, and KM UMa are from Kreiner (2004).

The light elements used for MU Aqr, AH Aur, XY Boo, DN Boo, CW CMi, V1261 Cyg, 2181 Cyg, V1065 Her, V1097 Her, V470 Hya, CE Leo, HI Leo, VW LMi, DI Lyn, HN Lyn, V502 Oph, V1853 Ori, KV Peg, VZ Psc, EQ UMa, II UMa, GR Vir, IR Vir, and NN Vir are from Paschke (2014).

The light elements used for V731 Cep and V337 Gem are from Nelson (2014).

The light elements used for V449 Aur, V972 Her, and V391 Vir are from the AAVSO VSX site (Watson *et al.* 2014). O–C values listed in this paper can be directly compared with values published in the AAVSO EB monographs.

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

<i>Star</i>	<i>JD (min) Hel. 2400000+</i>	<i>Cycle</i>	<i>O-C (day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard Error (day)</i>	<i>Star</i>	<i>JD (min) Hel. 2400000+</i>	<i>Cycle</i>	<i>O-C (day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard Error (day)</i>
RT And	58372.6608	27397	-0.0101	V	G. Samolyk	0.0001	SS Ari	58389.6262	47689.5	-0.4006	V	T. Arranz	0.0002
RT And	58386.4961	27419	-0.0112	V	T. Arranz	0.0001	SS Ari	58404.6523	47726.5	-0.3963	V	T. Arranz	0.0002
RT And	58404.7338	27448	-0.0125	V	G. Samolyk	0.0001	SS Ari	58416.6253	47756	-0.4001	V	T. Arranz	0.0001
TW And	58397.3841	4700	-0.0641	V	T. Arranz	0.0001	SS Ari	58436.7231	47805.5	-0.3989	V	N. Simmons	0.0001
UU And	58375.7307	11253	0.1018	V	G. Samolyk	0.0002	SS Ari	58459.6590	47862	-0.4017	V	G. Samolyk	0.0001
UU And	58390.5921	11263	0.1003	V	T. Arranz	0.0002	RY Aur	58413.8697	7384	0.0196	V	G. Samolyk	0.0002
UU And	58393.5663	11265	0.1019	V	T. Arranz	0.0002	TT Aur	58390.9043	27874	-0.0075	V	G. Samolyk	0.0001
UU And	58396.5385	11267	0.1015	V	T. Arranz	0.0001	WW Aur	58488.6350	10116	0.0013	V	N. Simmons	0.0001
WZ And	58385.5505	25175	0.0804	V	T. Arranz	0.0001	WW Aur	58488.6357	10116	0.0020	V	G. Samolyk	0.0002
WZ And	58410.5952	25211	0.0814	V	G. Samolyk	0.0001	AH Aur	58461.4690	67113	-0.0141	V	T. Arranz	0.0001
WZ And	58415.4656	25218	0.0822	V	T. Arranz	0.0001	AH Aur	58480.4917	67151.5	-0.0145	V	T. Arranz	0.0002
WZ And	58436.3360	25248	0.0829	V	T. Arranz	0.0001	AP Aur	58404.8570	28033	1.7107	V	G. Samolyk	0.0002
WZ And	58461.3801	25284	0.0833	V	T. Arranz	0.0001	AP Aur	58467.7779	28143.5	1.7226	V	G. Samolyk	0.0002
XZ And	58374.8802	25343	0.1923	V	G. Samolyk	0.0001	AP Aur	58498.5254	28197.5	1.7272	V	T. Arranz	0.0002
XZ And	58392.5252	25356	0.1927	V	T. Arranz	0.0001	AR Aur	58409.8397	4839	-0.1326	V	G. Samolyk	0.0002
XZ And	58396.5971	25359	0.1928	V	T. Arranz	0.0001	CL Aur	58414.7018	20450	0.1858	V	G. Samolyk	0.0002
XZ And	58415.6002	25373	0.1940	V	N. Simmons	0.0001	CL Aur	58464.4770	20490	0.1864	V	T. Arranz	0.0001
XZ And	58464.4630	25409	0.1948	V	T. Arranz	0.0001	CL Aur	58489.3631	20510	0.1852	V	T. Arranz	0.0002
XZ And	58479.3924	25420	0.1941	V	T. Arranz	0.0001	CL Aur	58494.3416	20514	0.1862	V	T. Arranz	0.0001
XZ And	58494.3227	25431	0.1944	V	T. Arranz	0.0001	EM Aur	58404.8240	15046	-1.1207	V	G. Samolyk	0.0003
AB And	58382.6482	67109.5	-0.0473	V	G. Samolyk	0.0001	EP Aur	58426.5485	54343	0.0188	V	T. Arranz	0.0001
AB And	58397.4190	67154	-0.0457	V	L. Corp	0.0001	EP Aur	58455.5097	54392	0.0206	V	T. Arranz	0.0001
AB And	58414.3451	67205	-0.0461	V	T. Arranz	0.0001	EP Aur	58491.5612	54453	0.0206	V	T. Arranz	0.0002
AB And	58414.5087	67205.5	-0.0485	V	T. Arranz	0.0001	EP Aur	58494.5171	54458	0.0214	V	T. Arranz	0.0002
AB And	58428.6164	67248	-0.0462	TG	G. Conrad	0.0001	EP Aur	58508.7014	54482	0.0215	TG	G. Conrad	0.0002
AB And	58428.7805	67248.5	-0.0480	TG	G. Conrad	0.0001	HP Aur	58388.8674	10987	0.0713	V	G. Samolyk	0.0001
AB And	58458.3198	67337.5	-0.0471	V	T. Arranz	0.0001	HP Aur	58425.8590	11013	0.0697	V	G. Samolyk	0.0002
AB And	58489.5170	67431.5	-0.0478	V	G. Samolyk	0.0001	HP Aur	58470.6789	11044.5	0.0710	V	G. Samolyk	0.0003
AB And	58492.3389	67440	-0.0470	V	T. Arranz	0.0001	HP Aur	58508.3843	11071	0.0719	V	T. Arranz	0.0002
AD And	58382.6338	19651.5	-0.0446	V	G. Samolyk	0.0002	IM Aur	58456.5207	14384	-0.1315	V	T. Arranz	0.0001
AD And	58391.5082	19660.5	-0.0459	V	T. Arranz	0.0001	IM Aur	58466.4967	14392	-0.1338	V	T. Arranz	0.0001
AD And	58415.6697	19685	-0.0462	V	G. Samolyk	0.0001	IM Aur	58486.4535	14408	-0.1338	V	T. Arranz	0.0001
BD And	58371.8497	50571	0.0175	V	G. Samolyk	0.0002	IM Aur	58491.4407	14412	-0.1358	V	T. Arranz	0.0002
BD And	58390.3650	50611	0.0167	V	T. Arranz	0.0001	IM Aur	58496.4312	14416	-0.1344	V	T. Arranz	0.0001
BD And	58404.7127	50642	0.0144	V	G. Samolyk	0.0002	V449 Aur	57405.8179	12656.5	-0.1700	V	V. Petriew	0.0003
BD And	58414.4343	50663	0.0151	V	T. Arranz	0.0001	V449 Aur	57701.0105	13076	-0.1577	V	V. Petriew	0.0007
BX And	58387.5829	35827.5	-0.1021	V	T. Arranz	0.0003	V449 Aur	57702.7693	13078.5	-0.1581	V	V. Petriew	0.0003
BX And	58440.3586	35914	-0.1014	V	T. Arranz	0.0001	V449 Aur	57703.8280	13080	-0.1548	V	V. Petriew	0.0001
BX And	58462.3225	35950	-0.1017	V	T. Arranz	0.0001	V449 Aur	57709.8076	13088.5	-0.1562	V	V. Petriew	0.0002
BX And	58490.3864	35996	-0.1031	V	T. Arranz	0.0001	V599 Aur	57415.6940	15529.5	-0.0016	V	V. Petriew	0.0004
DS And	58409.6978	22035.5	0.0054	V	G. Samolyk	0.0001	TU Boo	58486.9244	78389.5	-0.1597	V	G. Samolyk	0.0002
QR And	58408.8113	34233	0.1570	V	R. Sabo	0.0002	TU Boo	58498.9219	78426.5	-0.1608	V	K. Menzies	0.0001
QR And	58415.4224	34243	0.1635	V	T. Arranz	0.0003	TY Boo	58487.9365	75698	0.0649	V	G. Samolyk	0.0001
QX And	58390.7908	14292	0.0046	V	G. Samolyk	0.0002	TZ Boo	58486.9403	63447	0.0611	V	G. Samolyk	0.0002
QX And	58409.5425	14337.5	0.0025	V	G. Samolyk	0.0003	VW Boo	58486.9145	79789	-0.2849	V	G. Samolyk	0.0002
QX And	58409.7500	14338	0.0039	V	G. Samolyk	0.0002	VW Boo	58499.0659	79824.5	-0.2860	V	R. Sabo	0.0001
V463 And	58373.6504	14463	-0.0078	C	G. Frey	0.0002	XY Boo	58244.6952	49359	0.0147	C	G. Frey	0.0005
RY Aqr	58407.5879	8941	-0.1431	V	G. Samolyk	0.0001	DN Boo	58272.6992	7536	0.0031	C	G. Frey	0.0003
RY Aqr	58407.5882	8941	-0.1428	V	N. Simmons	0.0001	DU Boo	57475.9347	4712.5	0.0228	V	V. Petriew	0.0005
CX Aqr	58376.6621	39431	0.0152	C	G. Frey	0.0001	GM Boo	58247.7039	17297	0.0286	C	G. Frey	0.0002
CX Aqr	58376.6629	39431	0.0160	V	G. Samolyk	0.0001	HH Boo	57531.7565	15789	-0.0027	V	V. Petriew	0.0002
CX Aqr	58410.5792	39492	0.0172	V	G. Samolyk	0.0001	SV Cam	58407.6983	26663	0.0590	V	G. Samolyk	0.0002
MU Aqr	58368.7150	25366	0.0222	C	G. Frey	0.0001	CD Cam	58470.7591	7469.5	-0.0138	V	G. Samolyk	0.0003
XZ Aql	58409.5619	7716	0.1803	V	G. Samolyk	0.0001	CD Cam	58493.6816	7499.5	-0.0169	V	G. Samolyk	0.0004
KO Aql	58424.6296	5774	0.1036	V	S. Cook	0.0003	AH Cnc	58499.5737	16643.5	0.0208	V	T. Arranz	0.0002
KP Aql	58390.5983	5343.5	-0.0201	V	G. Samolyk	0.0002	R CMa	58488.7479	12500	0.1307	V	N. Simmons	0.0002
OO Aql	58381.3376	39006.5	0.0706	V	L. Corp	0.0003	RT CMa	58487.7903	24628	-0.7735	V	G. Samolyk	0.0001
OO Aql	58384.6327	39013	0.0715	V	G. Samolyk	0.0001	RT CMa	58512.3709	24647	-0.7746	V	T. Arranz	0.0001
OO Aql	58414.5333	39072	0.0716	V	G. Samolyk	0.0001	SX CMa	58504.7882	18722	0.0228	V	G. Samolyk	0.0001
V343 Aql	58388.6592	16234	-0.0429	V	G. Samolyk	0.0001	TZ CMa	58462.8004	16395	-0.2278	V	G. Samolyk	0.0002
V346 Aql	58374.4136	14874	-0.0137	V	T. Arranz	0.0001	UU CMa	58463.8395	6400	-0.0714	V	G. Samolyk	0.0001
V724 Aql	58377.6839	6501	-0.0211	C	G. Frey	0.0002	AC CMi	58144.6650	7110	0.0039	C	G. Frey	0.0001
V805 Aql	58360.7051	2469	-0.0108	V	S. Cook	0.0006	AC CMi	58462.9337	7477	0.0041	V	G. Samolyk	0.0002
RX Ari	58385.7302	19412	0.0606	V	G. Samolyk	0.0001	AK CMi	58462.9345	27145	-0.0251	V	G. Samolyk	0.0001
SS Ari	58376.8409	47658	-0.3971	V	G. Samolyk	0.0002	AK CMi	58510.4715	27229	-0.0235	V	T. Arranz	0.0001

Table continued on following pages

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

<i>Star</i>	<i>JD (min)</i> <i>Hel.</i> <i>2400000+</i>	<i>Cycle</i>	<i>O-C</i> <i>(day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard</i> <i>Error</i> <i>(day)</i>	<i>Star</i>	<i>JD (min)</i> <i>Hel.</i> <i>2400000+</i>	<i>Cycle</i>	<i>O-C</i> <i>(day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard</i> <i>Error</i> <i>(day)</i>
CW CMi	58152.6516	18921.5	-0.0500	C	G. Frey	0.0002	RW Com	58496.0107	77834	0.0136	V	R. Sabo	0.0001
CZ CMi	58136.6738	13219	-0.0130	C	G. Frey	0.0001	RZ Com	58488.8935	69870	0.0567	V	G. Samolyk	0.0001
RW Cap	58336.8686	4620	-0.7639	V	S. Cook	0.0007	SS Com	58507.9306	81165.5	0.9596	V	G. Samolyk	0.0002
TY Cap	58401.7264	9560	0.0943	V	S. Cook	0.0003	CC Com	58493.9253	85915.5	-0.0298	V	G. Samolyk	0.0001
RZ Cas	58463.6905	12770	0.0800	V	G. Samolyk	0.0001	YY CrB	57485.7716	13240	0.0150	V	V. Petriew	0.0002
TV Cas	58394.4629	7609	-0.0304	V	T. Arranz	0.0001	AE Cyg	58382.6046	14235	-0.0039	V	G. Samolyk	0.0002
TV Cas	58463.3435	7647	-0.0285	V	T. Arranz	0.0001	AE Cyg	58386.4811	14239	-0.0042	V	T. Arranz	0.0001
TW Cas	58415.5607	11487	0.0156	V	G. Samolyk	0.0002	AE Cyg	58388.4191	14241	-0.0045	V	T. Arranz	0.0001
ZZ Cas	58367.7498	20048	0.0255	V	S. Cook	0.0004	AE Cyg	58414.5869	14268	-0.0048	V	G. Samolyk	0.0001
AB Cas	58385.8125	11465	0.1417	V	G. Samolyk	0.0001	DK Cyg	58380.3763	43299.5	0.1270	V	T. Arranz	0.0001
AB Cas	58396.7468	11473	0.1410	V	S. Cook	0.0003	KR Cyg	58414.6086	34678	0.0249	V	G. Samolyk	0.0001
AB Cas	58470.5582	11527	0.1412	V	G. Samolyk	0.0001	V387 Cyg	58391.3903	47465	0.0212	V	T. Arranz	0.0001
CW Cas	58382.6331	52532	-0.1208	V	T. Arranz	0.0001	V387 Cyg	58416.3734	47504	0.0210	V	T. Arranz	0.0001
CW Cas	58385.3461	52540.5	-0.1181	V	T. Arranz	0.0001	V387 Cyg	58425.3419	47518	0.0212	V	T. Arranz	0.0001
CW Cas	58422.6519	52657.5	-0.1194	V	K. Menzies	0.0001	V456 Cyg	58341.6724	15070	0.0529	V	N. Simmons	0.0002
CW Cas	58456.6095	52764	-0.1209	TG	G. Conrad	0.0002	V456 Cyg	58374.6464	15107	0.0528	V	G. Samolyk	0.0001
DO Cas	57653.9075	34655.5	0.0042	V	V. Petriew	0.0006	V466 Cyg	58371.6195	21269	0.0071	V	G. Samolyk	0.0001
DO Cas	57698.7515	34721	0.0025	V	V. Petriew	0.0001	V477 Cyg	58374.4358	6044	-0.0393	V	T. Arranz	0.0001
DZ Cas	58375.6030	38147	-0.2129	V	G. Samolyk	0.0003	V704 Cyg	58371.5060	35801.5	0.0377	V	T. Arranz	0.0001
DZ Cas	58394.4424	38171	-0.2109	V	T. Arranz	0.0001	V836 Cyg	58380.4535	20702	0.0238	V	T. Arranz	0.0001
GT Cas	58372.8063	10379	0.2056	V	G. Samolyk	0.0004	V1425 Cyg	57641.9449	13766.5	0.0153	V	V. Petriew	0.0001
IR Cas	58412.5881	23577	0.0144	V	G. Samolyk	0.0001	V1425 Cyg	57646.9519	13770.5	0.0127	V	V. Petriew	0.0007
IS Cas	58391.5355	16082	0.0701	V	T. Arranz	0.0001	V1425 Cyg	57648.8310	13772	0.0132	V	V. Petriew	0.0002
IS Cas	58393.3788	16083	0.0719	V	T. Arranz	0.0001	V1425 Cyg	57692.6643	13807	0.0130	V	V. Petriew	0.0008
IS Cas	58413.6357	16094	0.0721	V	N. Simmons	0.0001	V1425 Cyg	57697.6738	13811	0.0129	V	V. Petriew	0.0003
IT Cas	58384.7470	7602	0.0709	V	G. Samolyk	0.0002	V2181 Cyg	58414.6400	13354	-0.007	V	G. Samolyk	0.0002
IV Cas	58415.5149	17587	-0.1325	V	G. Samolyk	0.0001	W Del	58371.6598	3130	0.0173	V	G. Samolyk	0.0002
MM Cas	58377.5392	19833	0.1207	V	T. Arranz	0.0001	TT Del	58390.6432	4583	-0.1142	V	G. Samolyk	0.0002
MM Cas	58399.5468	19852	0.1174	V	T. Arranz	0.0002	TY Del	58384.6102	12950	0.0720	V	G. Samolyk	0.0001
MM Cas	58413.4501	19864	0.1190	V	T. Arranz	0.0001	YY Del	58371.6864	19433	0.0137	C	G. Frey	0.0002
OR Cas	58376.5881	11372	-0.0332	V	T. Arranz	0.0001	YY Del	58375.6487	19438	0.0105	V	G. Samolyk	0.0001
OR Cas	58381.5705	11376	-0.0337	V	T. Arranz	0.0001	DM Del	58376.7455	16427	-0.1352	TG	G. Conrad	0.0001
OR Cas	58416.4509	11404	-0.0332	V	T. Arranz	0.0001	DM Del	58409.6802	16466	-0.1428	V	S. Cook	0.0005
OR Cas	58417.6966	11405	-0.0332	V	S. Cook	0.0008	FZ Del	58398.3955	34568	-0.0267	V	T. Arranz	0.0001
OR Cas	58461.2977	11440	-0.0320	V	T. Arranz	0.0001	Z Dra	58470.9014	6355	-0.0035	V	G. Samolyk	0.0001
OX Cas	58463.6037	6907	0.0782	V	G. Samolyk	0.0002	TZ Eri	58415.8534	6140	0.3495	V	G. Samolyk	0.0001
OX Cas	58488.4917	6917	0.0727	V	G. Samolyk	0.0004	YY Eri	58467.7890	52523.5	0.1670	V	G. Samolyk	0.0001
PV Cas	58375.4003	10367.5	-0.0004	V	T. Arranz	0.0001	YY Eri	58498.3306	52618.5	0.1666	V	T. Arranz	0.0001
V364 Cas	58387.3890	15588.5	-0.0245	V	T. Arranz	0.0001	RW Gem	58462.6010	14015	0.0027	V	T. Arranz	0.0001
V364 Cas	58413.6214	15605.5	-0.0243	V	G. Samolyk	0.0001	RW Gem	58488.3906	14024	0.0029	V	T. Arranz	0.0001
V364 Cas	58495.4048	15658.5	-0.0235	V	T. Arranz	0.0001	SX Gem	58488.8555	28867	-0.0529	V	G. Samolyk	0.0001
V375 Cas	58376.5343	16108.5	0.2681	V	T. Arranz	0.0002	WW Gem	58461.9653	26238	0.0233	V	G. Samolyk	0.0001
V375 Cas	58390.5315	16118	0.2682	V	T. Arranz	0.0001	WW Gem	58486.7206	26258	0.0224	V	G. Samolyk	0.0001
V375 Cas	58393.4784	16120	0.2683	V	T. Arranz	0.0001	AF Gem	58489.8231	25193	-0.0696	V	G. Samolyk	0.0001
V380 Cas	58461.5779	24178	-0.0737	V	N. Simmons	0.0002	AF Gem	58498.5283	25200	-0.0689	V	T. Arranz	0.0001
V776 Cas	57659.6480	11714.5	-0.0034	V	V. Petriew	0.0006	AL Gem	58486.7253	23116	0.0978	V	G. Samolyk	0.0001
V776 Cas	57659.8670	11715	-0.0046	V	V. Petriew	0.0005	EG Gem	58140.6633	24184	0.3162	C	G. Frey	0.0001
V776 Cas	57677.7040	11755.5	-0.0045	V	V. Petriew	0.0007	V337 Gem	58132.7069	2935	0.0026	C	G. Frey	0.0004
V1261 Cas	58381.5540	13770	0.0080	V	T. Arranz	0.0002	CC Her	58338.7008	10767	0.3184	C	G. Frey	0.0001
V1261 Cas	58416.3756	13879.5	0.0081	V	T. Arranz	0.0002	CT Her	58337.7198	8853	0.0117	V	S. Cook	0.0008
U Cep	58375.7471	5549	0.2234	V	G. Samolyk	0.0002	V772 Her	57545.8225	5737	-0.0026	V	V. Petriew	0.0004
U Cep	58385.7167	5553	0.2208	V	G. Samolyk	0.0001	V772 Her	57552.8581	5745	-0.0030	V	V. Petriew	0.0004
SU Cep	58372.5339	35552.5	0.0063	V	T. Arranz	0.0001	V772 Her	57559.8981	5753	0.0009	V	V. Petriew	0.0006
WY Cep	58361.7326	26611	0.023	V	S. Cook	0.0003	V772 Her	57560.7788	5754	0.0021	V	V. Petriew	0.0004
XX Cep	58377.6210	5792	0.0231	V	T. Arranz	0.0001	V972 Her	57515.9164	20347.5	-0.0028	V	V. Petriew	0.0012
XX Cep	58384.6340	5795	0.0242	V	N. Simmons	0.0002	V972 Her	57516.8078	20349.5	0.0024	V	V. Petriew	0.0009
ZZ Cep	58412.6721	14233	-0.0183	V	G. Samolyk	0.0004	V1065 Her	58293.7147	17588	-0.0122	C	G. Frey	0.0002
CQ Cep	58358.7257	15782	-0.1341	V	S. Cook	0.0006	V1097 Her	58281.7294	16124	0.0092	C	G. Frey	0.0001
DV Cep	58415.6311	10028	-0.0052	V	G. Samolyk	0.0002	WY Hya	58508.7691	25052.5	0.0408	V	G. Samolyk	0.0001
V731 Cep	58377.5895	377	-0.4082	V	T. Arranz	0.0001	AV Hya	58488.9489	31922	-0.1198	V	G. Samolyk	0.0001
SS Cet	58409.7539	5366	0.0697	V	G. Samolyk	0.0001	DF Hya	58489.8799	47495	0.0084	V	K. Menzies	0.0005
TT Cet	58372.8778	53147	-0.0823	V	G. Samolyk	0.0001	DK Hya	58467.9361	29936	0.0000	V	G. Samolyk	0.0002
TW Cet	58388.7820	50545.5	-0.0337	V	G. Samolyk	0.0001	V470 Hya	58508.7770	14687	0.0094	V	G. Samolyk	0.0004
TX Cet	58467.6759	20767	0.0121	V	G. Samolyk	0.0001	SW Lac	58374.6382	40843.5	-0.0736	V	G. Samolyk	0.0001
RW Com	58487.9404	77800	0.0131	V	G. Samolyk	0.0001	SW Lac	58383.4603	40871	-0.0713	V	T. Arranz	0.0001

Table continued on following pages

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

<i>Star</i>	<i>JD (min)</i> <i>Hel.</i> <i>2400000+</i>	<i>Cycle</i>	<i>O-C</i> <i>(day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard</i> <i>Error</i> <i>(day)</i>	<i>Star</i>	<i>JD (min)</i> <i>Hel.</i> <i>2400000+</i>	<i>Cycle</i>	<i>O-C</i> <i>(day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard</i> <i>Error</i> <i>(day)</i>
SW Lac	58413.2879	40964	-0.0707	V	L. Corp	0.0002	UX Peg	58384.7357	11627	-0.0052	V	G. Samolyk	0.0001
SW Lac	58413.6075	40965	-0.0719	V	G. Samolyk	0.0001	AT Peg	58375.6965	11479	0.0293	C	G. Frey	0.0001
SW Lac	58458.3480	41104.5	-0.0719	V	T. Arranz	0.0001	AW Peg	58368.7284	1377	0.0206	V	S. Cook	0.0009
VX Lac	58383.5000	12215	0.0873	V	T. Arranz	0.0001	BB Peg	58411.6443	40518	-0.0312	V	G. Samolyk	0.0001
VX Lac	58425.4053	12254	0.0874	V	T. Arranz	0.0001	BB Peg	58422.4884	40548	-0.0322	V	K. Menzies	0.0004
VX Lac	58470.5336	12296	0.0869	V	G. Samolyk	0.0001	BB Peg	58459.5448	40650.5	-0.0297	V	G. Samolyk	0.0002
AW Lac	58371.6627	27779	0.2161	V	G. Samolyk	0.0002	BG Peg	58390.7552	6586	-2.3767	V	G. Samolyk	0.0003
CO Lac	58376.6901	19999	0.0095	V	G. Samolyk	0.0001	BO Peg	58370.6995	21981	-0.0575	C	G. Frey	0.0001
CO Lac	58387.4861	20006	0.0101	V	T. Arranz	0.0001	BX Peg	58385.6591	50604	-0.1322	V	G. Samolyk	0.0001
CO Lac	58410.6190	20021	0.0098	V	G. Samolyk	0.0001	BX Peg	58412.5787	50700	-0.1330	V	G. Samolyk	0.0001
CO Lac	58438.3792	20039	0.0103	V	T. Arranz	0.0001	DI Peg	58405.6837	18557	0.0113	V	G. Samolyk	0.0001
GX Lac	58376.6122	2931	-0.0413	V	G. Samolyk	0.0002	GP Peg	58468.6591	17661	-0.0566	V	G. Samolyk	0.0001
Y Leo	58459.8357	7724	-0.0671	V	G. Samolyk	0.0001	KV Peg	58372.7166	23177	-0.0175	C	G. Frey	0.0003
UV Leo	58493.8052	33417	0.0458	V	G. Samolyk	0.0001	KW Peg	58385.6326	12527	0.2227	V	G. Samolyk	0.0002
VZ Leo	58507.8320	25088	-0.0457	V	G. Samolyk	0.0003	KW Peg	58412.5717	12560	0.2212	V	G. Samolyk	0.0002
CE Leo	58218.6640	34733	-0.0086	C	G. Frey	0.0001	Z Per	58504.5628	4203	-0.3388	V	G. Samolyk	0.0001
HI Leo	58219.6799	17584	0.0189	C	G. Frey	0.0001	RT Per	58379.9687	29437	0.1132	V	R. Sabo	0.0001
T LMi	58409.9194	4309	-0.1331	V	G. Samolyk	0.0001	RT Per	58488.6933	29565	0.1145	V	G. Samolyk	0.0001
VW LMi	57481.7411	18807.5	0.0183	V	V. Petriew	0.0002	ST Per	58461.7831	6051	0.3210	V	G. Samolyk	0.0001
Z Lep	58459.8174	31232	-0.2005	V	G. Samolyk	0.0001	XZ Per	58411.8518	12942	-0.0744	V	G. Samolyk	0.0001
RR Lep	58470.6861	30689	-0.0458	V	G. Samolyk	0.0002	XZ Per	58470.5854	12993	-0.0741	V	G. Samolyk	0.0001
RR Lep	58494.4894	30715	-0.0436	V	T. Arranz	0.0002	BR Per	57392.7204	4551	0.0001	V	V. Petriew	0.0002
RR Lep	58495.4012	30716	-0.0472	V	T. Arranz	0.0001	BR Per	57695.8817	4833	0.0006	V	V. Petriew	0.0001
VZ Lib	58335.6916	37813.5	-0.0893	V	S. Cook	0.0004	IT Per	58414.7995	18929	-0.0420	V	G. Samolyk	0.0002
RY Lyn	58462.7855	10854	-0.0173	V	G. Samolyk	0.0002	IU Per	58467.6783	15001	0.0088	V	G. Samolyk	0.0002
DE Lyn	58162.7323	13851	-0.0204	V	K. Menzies	0.0001	IU Per	58468.5347	15002	0.0081	V	N. Simmons	0.0001
DI Lyn	57477.6736	1716.5	0.0109	V	V. Petriew	0.0008	KW Per	58468.5661	17250	0.0191	V	G. Samolyk	0.0001
HN Lyn	57444.6862	11658.5	0.0029	V	V. Petriew	0.0015	V432 Per	58414.8687	70106.5	0.0611	V	G. Samolyk	0.0001
Beta Lyr	58295.32	719	2.48	B	G. Samolyk	0.01	V432 Per	58468.5312	70273.5	0.0303	V	G. Samolyk	0.0002
Beta Lyr	58295.33	719	2.48	V	G. Samolyk	0.01	V432 Per	58489.6146	70339	0.0543	V	G. Samolyk	0.0001
Beta Lyr	58295.33	719	2.49	R	G. Samolyk	0.02	Beta Per	58409.7612	4453	0.1417	V	G. Samolyk	0.0001
Beta Lyr	58301.75	719.5	2.43	V	G. Samolyk	0.02	Y Psc	58374.8054	3383	-0.0254	V	G. Samolyk	0.0001
Beta Lyr	58301.78	719.5	2.47	B	G. Samolyk	0.02	RV Psc	58384.8570	61379	-0.0642	V	G. Samolyk	0.0002
Beta Lyr	58301.79	719.5	2.47	R	G. Samolyk	0.02	RV Psc	58468.5081	61530	-0.0658	V	G. Samolyk	0.0002
AT Mon	58450.9512	15694	0.0113	V	G. Samolyk	0.0001	RV Psc	58489.5606	61568	-0.0650	V	G. Samolyk	0.0001
BB Mon	58488.7463	43411	-0.0041	V	G. Samolyk	0.0001	VZ Psc	58363.4278	55620	0.0101	V	L. Corp	0.0003
BO Mon	58507.7881	6741	-0.0122	V	G. Samolyk	0.0001	VZ Psc	58461.5231	55995.5	0.0025	V	G. Samolyk	0.0002
V456 Oph	58322.7061	16166.5	0.0166	C	G. Frey	0.0001	VZ Psc	58461.6561	55996	0.0050	V	G. Samolyk	0.0002
V456 Oph	58357.7681	16201	0.0266	V	S. Cook	0.0004	VZ Psc	58480.3345	56067.5	0.0033	V	T. Arranz	0.0001
V501 Oph	58324.7090	28231	-0.0093	C	G. Frey	0.0001	UZ Pup	58489.8017	17457.5	-0.0114	V	G. Samolyk	0.0001
V502 Oph	58357.6574	21742	-0.0017	V	S. Cook	0.0005	AO Ser	58350.6799	27540	-0.0129	V	S. Cook	0.0002
V508 Oph	58375.6316	38554	-0.0271	V	N. Rivard	0.0002	RW Tau	58467.6286	4617	-0.2894	V	G. Samolyk	0.0001
V508 Oph	58384.5969	38580	-0.0264	V	G. Samolyk	0.0001	RZ Tau	58413.8377	49888	0.0913	V	G. Samolyk	0.0001
V566 Oph	58372.6909	40368	0.2520	V	S. Cook	0.0004	RZ Tau	58463.7185	50008	0.0911	V	G. Samolyk	0.0001
V839 Oph	58371.7305	43822	0.3247	V	S. Cook	0.0005	RZ Tau	58468.7074	50020	0.0919	V	N. Simmons	0.0001
EF Ori	58509.3619	3803	0.0114	V	T. Arranz	0.0001	RZ Tau	58493.6481	50080	0.0921	V	G. Samolyk	0.0001
EQ Ori	58497.3478	15497	-0.0405	V	T. Arranz	0.0001	TY Tau	58409.9148	34545	0.2741	V	G. Samolyk	0.0001
ER Ori	57760.5799	38106	0.1340	V	N. Rivard	0.0002	TY Tau	58489.6407	34619	0.2756	V	G. Samolyk	0.0002
ER Ori	58489.6827	39828	0.1443	V	G. Samolyk	0.0001	WY Tau	58478.8052	30424	0.0656	V	K. Menzies	0.0001
ER Ori	58496.4574	39844	0.1446	V	T. Arranz	0.0001	AC Tau	58411.8299	6252	0.1782	V	G. Samolyk	0.0002
FL Ori	58468.7212	8460	0.0425	V	G. Samolyk	0.0001	AM Tau	58487.7616	6475	-0.0762	V	G. Samolyk	0.0001
FR Ori	58470.8361	34658	0.0426	V	G. Samolyk	0.0002	AQ Tau	58385.8983	23629	0.5287	V	G. Samolyk	0.0003
FT Ori	58461.7597	5432	0.0223	V	G. Samolyk	0.0001	CT Tau	58414.8156	19511	-0.0694	V	G. Samolyk	0.0001
FZ Ori	58154.7550	35327	-0.0299	C	G. Frey	0.0001	EQ Tau	57697.8430	51222	-0.0338	V	V. Petriew	0.0001
FZ Ori	58489.7458	36164.5	-0.0279	V	G. Samolyk	0.0001	EQ Tau	57698.0136	51222.5	-0.0339	V	V. Petriew	0.0003
FZ Ori	58509.3457	36213.5	-0.0273	V	T. Arranz	0.0002	EQ Tau	58406.8179	53299	-0.0397	V	R. Sabo	0.0001
FZ Ori	58510.3464	36216	-0.0266	V	T. Arranz	0.0001	EQ Tau	58425.7623	53354.5	-0.0402	V	G. Samolyk	0.0001
GU Ori	58463.6938	32705.5	-0.0666	V	G. Samolyk	0.0002	EQ Tau	58488.5709	53538.5	-0.0397	V	G. Samolyk	0.0001
GU Ori	58509.3497	32802.5	-0.0668	V	T. Arranz	0.0001	V Tri	58409.7923	57989	-0.0060	V	G. Samolyk	0.0001
V1853 Ori	58133.6551	10619	0.0003	C	G. Frey	0.0001	V Tri	58470.6536	58093	-0.0061	V	N. Simmons	0.0001
U Peg	58369.5018	58322	-0.1695	V	L. Corp	0.0001	X Tri	58450.3725	16415	-0.0988	V	T. Arranz	0.0001
U Peg	58375.8725	58339	-0.1701	V	G. Samolyk	0.0001	X Tri	58451.3441	16416	-0.0987	V	T. Arranz	0.0001
U Peg	58410.7273	58432	-0.1700	V	G. Samolyk	0.0001	X Tri	58483.4042	16449	-0.0993	V	T. Arranz	0.0001
U Peg	58463.5710	58573	-0.1705	V	G. Samolyk	0.0001	X Tri	58484.3757	16450	-0.0993	V	T. Arranz	0.0001
TY Peg	58373.8410	5796	-0.4501	V	G. Samolyk	0.0001	X Tri	58485.3473	16451	-0.0993	V	T. Arranz	0.0001

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

<i>Star</i>	<i>JD (min) Hel. 2400000+</i>	<i>Cycle</i>	<i>O-C (day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard Error (day)</i>	<i>Star</i>	<i>JD (min) Hel. 2400000+</i>	<i>Cycle</i>	<i>O-C (day)</i>	<i>F</i>	<i>Observer</i>	<i>Standard Error (day)</i>
X Tri	58486.3188	16452	-0.0993	V	T. Arranz	0.0001	AH Vir	58496.9397	31120.5	0.2974	V	R. Sabo	0.0002
RS Tri	58407.9074	10722	-0.0593	V	G. Samolyk	0.0001	AW Vir	58242.6907	37345	0.0296	C	G. Frey	0.0001
RV Tri	58388.8748	16394	-0.0415	V	G. Samolyk	0.0001	AZ Vir	58246.6992	40811	-0.0236	C	G. Frey	0.0002
RV Tri	58422.7896	16439	-0.0417	V	K. Menzies	0.0001	BF Vir	58255.7286	19022	0.1221	C	G. Frey	0.0001
TY UMa	57831.6868	51613	0.3895	V	N. Rivard	0.0004	GR Vir	58263.7133	37891.5	0.0199	C	G. Frey	0.0002
TY UMa	58463.8610	53396	0.4214	V	K. Menzies	0.0001	IR Vir	58226.6805	22743.5	-0.0075	C	G. Frey	0.0001
TY UMa	58504.8125	53511.5	0.4237	V	G. Samolyk	0.0002	NN Vir	58251.7341	20286	0.0097	C	G. Frey	0.0002
UX UMa	57991.6549	104534	-0.0011	V	N. Rivard	0.0001	V391 Vir	58232.7304	19680.5	0.0064	C	G. Frey	0.0002
VV UMa	58425.9284	18346	-0.0816	V	G. Samolyk	0.0001	RS Vul	58375.7324	5710	0.0169	V	S. Cook	0.0008
XZ UMa	58415.9234	10020	-0.1490	V	N. Simmons	0.0001	AW Vul	58388.6531	15008	-0.0347	V	G. Samolyk	0.0002
XZ UMa	58470.9261	10065	-0.1507	V	G. Samolyk	0.0001	AY Vul	58409.5385	6518	-0.1667	V	G. Samolyk	0.0002
EQ UMa	57400.7189	24274.5	0.0013	V	V. Petriew	0.0007	BE Vul	58411.6398	11791	0.1080	V	G. Samolyk	0.0001
EQ UMa	57400.8996	24275	0.0029	V	V. Petriew	0.0007	BO Vul	58376.6403	11505	-0.0135	V	G. Samolyk	0.0001
HX UMa	57477.8377	13128	0.1641	V	V. Petriew	0.0009	BO Vul	58411.6661	11523	-0.0134	V	G. Samolyk	0.0001
II UMa	57478.9404	10880.5	0.0177	V	V. Petriew	0.0012	BS Vul	58373.6428	31729	-0.0340	V	G. Samolyk	0.0001
II UMa	57510.7117	10919	0.0178	V	V. Petriew	0.0027	BS Vul	58413.6236	31813	-0.0348	V	G. Samolyk	0.0004
KM UMa	57443.8348	14050	-0.0059	V	V. Petriew	0.0003	BU Vul	58373.6587	43656	0.0173	V	S. Cook	0.0003
AG Vir	58223.7181	19904	-0.0170	C	G. Frey	0.0002	BU Vul	58385.6052	43677	0.0149	V	G. Samolyk	0.0001