

Recent Minima of 171 Eclipsing Binary Stars

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Abstract This paper continues the publication of times of minima for 171 eclipsing binary stars from observations reported to the AAVSO Eclipsing Binary section. Times of minima from CCD observations received by the author from March 2015 through October 2015 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/gsamoj432.txt>. This list, along with the eclipsing binary data from earlier AAVSO publications, is also included in the Lichtenknecker database (Kreiner 2011) 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 Woerden (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: CW Cas (Samolyk 1992), DV Cep (Frank and Lichtenknecker 1987), DK Hya (Samolyk 1990), GU Ori (Samolyk 1985). The light elements used for QX And, LR Com, V1193 Cyg, and 1901 Cyg, are from

(Kreiner 2004). The light elements used for PU Boo and BG Vul are from Paschke (2014). O–C values listed in this paper can be directly compared with values published in the AAVSO EB monographs.

References

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

Star	JD (min) Hel.	Cycle	O–C (day)	F	Observer	Error (day)	Star	JD (min) Hel.	Cycle	O–C (day)	F	Observer	Error (day)
	2400000 +							2400000 +					
RT And	57258.8250	25626	–0.0117	V	G. Samolyk	0.0001	QX And	57307.5986	11664	0.0004	V	G. Samolyk	0.0004
RT And	57277.6933	25656	–0.0113	V	S. Cook	0.0004	QX And	57307.8045	11664.5	0.0002	V	G. Samolyk	0.0003
RT And	57313.5423	25713	–0.0113	V	N. Simmons	0.0001	QX And	57307.8050	11664.5	0.0007	V	K. Menzies	0.0002
UU And	57223.8281	10478	0.0786	V	G. Samolyk	0.0002	QX And	57310.8953	11672	–0.0003	V	K. Menzies	0.0003
UU And	57278.8219	10515	0.0795	V	G. Samolyk	0.0002	CX Aqr	57250.7889	37406	0.0141	V	G. Samolyk	0.0001
WZ And	57257.8805	23554	0.0714	V	R. Sabo	0.0002	CZ Aqr	57235.8667	16070	–0.0591	V	G. Samolyk	0.0001
XZ And	57321.6194	24567	0.1793	V	G. Samolyk	0.0001	XZ Aql	57258.6784	7178	0.1762	V	G. Samolyk	0.0001
AB And	57221.8655	63612	–0.0372	V	G. Samolyk	0.0001	KO Aql	57221.7220	5354	0.0991	V	N. Simmons	0.0002
AB And	57245.4301	63683	–0.0370	V	L. Corp	0.0002	KP Aql	57255.7583	5006.5	–0.0195	V	G. Samolyk	0.0001
AB And	57245.5943	63683.5	–0.0387	V	L. Corp	0.0002	OO Aql	57214.4472	36704	0.0606	V	L. Corp	0.0002
AB And	57258.7055	63723	–0.0373	V	N. Simmons	0.0001	OO Aql	57221.7967	36718.5	0.0617	V	G. Samolyk	0.0002
AB And	57273.6404	63768	–0.0375	V	K. Menzies	0.0001	OO Aql	57247.6421	36769.5	0.0609	V	N. Simmons	0.0002
AD And	57222.8785	18475.5	–0.0336	V	G. Samolyk	0.0002	OO Aql	57255.7496	36785.5	0.0598	V	S. Cook	0.0003
BD And	57307.6353	48272	0.0155	V	G. Samolyk	0.0003	V343 Aql	57222.8714	15602	–0.0416	V	G. Samolyk	0.0003
BX And	57270.7894	33997	–0.0795	V	K. Menzies	0.0001	SS Ari	57285.9852	44971	–0.3480	V	R. Sabo	0.0001
BX And	57297.6329	34041	–0.0811	V	N. Simmons	0.0002	SX Aur	57312.8208	14173	0.0186	V	N. Simmons	0.0001
BX And	57322.6459	34082	–0.0828	V	S. Cook	0.0006	TT Aur	57320.7240	27071	–0.0016	V	G. Samolyk	0.0002
DS And	57270.8405	20908.5	0.0030	V	K. Menzies	0.0002	EM Aur	57278.8541	14428	–1.1050	V	G. Samolyk	0.0004
DS And	57271.8512	20909.5	0.0032	V	K. Menzies	0.0003	HP Aur	57321.7537	10237	0.0675	V	N. Simmons	0.0001
DS And	57307.7237	20945	0.0022	V	G. Samolyk	0.0002	TY Boo	57139.7531	71447	0.0764	V	G. Samolyk	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>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>Error</i> <i>(day)</i>
TY Boo	57139.9120	71447.5	0.0767	V	G. Samolyk	0.0001	CG Cyg	57227.7903	28207	0.0740	V	G. Samolyk	0.0001
TY Boo	57150.6950	71481.5	0.0767	V	K. Menzies	0.0001	CG Cyg	57236.6257	28221	0.0734	V	G. Samolyk	0.0001
TZ Boo	57140.6495	58916.5	0.0627	V	G. Samolyk	0.0001	DK Cyg	57222.6950	40840	0.1091	V	G. Samolyk	0.0002
TZ Boo	57140.7982	58917	0.0628	V	G. Samolyk	0.0002	DK Cyg	57272.5908	40946	0.1117	V	K. Menzies	0.0001
TZ Boo	57145.7015	58933.5	0.0630	V	K. Menzies	0.0004	DO Cyg	57156.8023	7409	-0.0321	V	B. Harris	0.0003
TZ Boo	57150.6047	58950	0.0630	V	K. Menzies	0.0001	KR Cyg	57201.8101	33243	0.0191	V	N. Simmons	0.0001
UW Boo	57131.7649	14658	0.0010	V	K. Menzies	0.0001	KR Cyg	57267.7314	33321	0.0186	V	S. Cook	0.0007
VW Boo	57168.6623	75938	-0.2423	V	N. Simmons	0.0002	KV Cyg	57236.6450	9781	0.0596	V	G. Samolyk	0.0002
AD Boo	57197.7228	15239	0.0319	R	S. Cook	0.0006	MY Cyg	57197.8534	5830	0.0044	V	G. Samolyk	0.0002
CK Boo	57152.4916	40139.5	0.0682	V	L. Corp	0.0003	V346 Cyg	57317.7125	7885	0.1839	V	G. Samolyk	0.0002
CK Boo	57179.4800	40215.5	0.0652	V	L. Corp	0.0003	V387 Cyg	57221.6616	45639	0.0215	V	G. Samolyk	0.0003
PU Boo	57166.2840	11966	-0.0019	V	Y. Ogmen	0.0001	V387 Cyg	57280.5960	45731	0.0210	V	N. Simmons	0.0001
TY Cap	57258.6882	8757	0.0863	V	G. Samolyk	0.0001	V387 Cyg	57305.5785	45770	0.0203	V	G. Samolyk	0.0001
RZ Cas	57312.6617	11807	0.0741	V	G. Samolyk	0.0001	V388 Cyg	57222.6128	17775	-0.1107	V	G. Samolyk	0.0003
ZZ Cas	57279.6544	19173	0.0162	V	N. Simmons	0.0001	V388 Cyg	57227.7655	17781	-0.1123	V	N. Simmons	0.0002
AB Cas	57278.6332	10655	0.1302	V	G. Samolyk	0.0001	V401 Cyg	57208.8101	22950	0.0812	V	G. Samolyk	0.0002
CW Cas	57235.8691	48935.5	-0.0901	V	G. Samolyk	0.0002	V401 Cyg	57319.5242	23140	0.0781	V	K. Menzies	0.0002
CW Cas	57310.6392	49170	-0.0936	V	N. Simmons	0.0001	V456 Cyg	57201.8354	13791	0.0508	V	G. Samolyk	0.0001
CW Cas	57313.6692	49179.5	-0.0928	V	N. Simmons	0.0001	V456 Cyg	57285.6080	13885	0.0513	V	G. Samolyk	0.0001
CW Cas	57314.6254	49182.5	-0.0932	V	G. Samolyk	0.0001	V466 Cyg	57197.8332	20425.5	0.0069	V	G. Samolyk	0.0001
CW Cas	57314.7855	49183	-0.0925	V	G. Samolyk	0.0001	V466 Cyg	57200.6163	20427.5	0.0069	V	K. Menzies	0.0001
DZ Cas	57320.7236	36803	-0.1980	V	G. Samolyk	0.0001	V477 Cyg	57233.8043	5558	-0.0334	V	G. Samolyk	0.0001
GT Cas	57236.6792	9999	0.2040	V	G. Samolyk	0.0002	V548 Cyg	57255.6222	7090	0.0244	V	G. Samolyk	0.0003
IR Cas	57280.6052	21914	0.0113	V	G. Samolyk	0.0002	V704 Cyg	57213.8308	33773	0.0356	V	G. Samolyk	0.0002
IR Cas	57310.5543	21958	0.0103	V	N. Simmons	0.0001	V1034 Cyg	57255.3910	14655	0.0082	V	L. Corp	0.0004
IS Cas	57321.6157	15501	0.0690	V	G. Samolyk	0.0001	V1193 Cyg	57192.2812	9314	0.0072	C	Y. Ogmen	0.0001
IT Cas	57297.5814	7323	0.0673	V	G. Samolyk	0.0001	V1315 Cyg	57233.3598	44194	0.0214	C	Y. Ogmen	0.0001
OR Cas	57317.7379	10522	-0.0286	V	G. Samolyk	0.0002	V1901 Cyg	56915.2817	5458	0.0172	C	Y. Ogmen	0.0001
PV Cas	57236.6853	9717	-0.0347	V	N. Simmons	0.0001	V2311 Cyg	57233.2990	44194	-0.0394	C	Y. Ogmen	0.0001
U Cep	57278.7816	5109	0.1988	V	N. Simmons	0.0001	W Del	57227.8222	2892	0.0315	V	G. Samolyk	0.0001
SU Cep	57279.5854	34340	0.0066	V	G. Samolyk	0.0001	W Del	57256.6583	2898	0.0310	V	N. Simmons	0.0001
WW Cep	57313.6525	21051	0.3439	V	G. Samolyk	0.0002	TT Del	57250.8099	4186	-0.1132	V	G. Samolyk	0.0002
WZ Cep	57226.6360	69916	-0.1514	V	G. Samolyk	0.0002	TY Del	57250.6519	11998	0.0665	V	G. Samolyk	0.0001
WZ Cep	57226.8428	69916.5	-0.1534	V	G. Samolyk	0.0002	YY Del	57256.5955	18027	0.0104	V	G. Samolyk	0.0002
WZ Cep	57278.6055	70040.5	-0.1541	V	N. Simmons	0.0001	YY Del	57279.5947	18056	0.0099	V	G. Samolyk	0.0001
XX Cep	57255.6913	5312	0.0102	V	N. Simmons	0.0001	YY Del	57283.5606	18061	0.0104	V	K. Menzies	0.0001
DK Cep	57225.7270	23973	0.0299	V	G. Samolyk	0.0001	FZ Del	57222.7931	33067	-0.0269	V	G. Samolyk	0.0001
DL Cep	57221.7892	14275	0.0649	V	G. Samolyk	0.0003	RZ Dra	57221.7595	23679	0.0633	V	G. Samolyk	0.0002
DV Cep	57246.6840	9022	-0.0056	V	N. Simmons	0.0001	TW Dra	57193.7353	4652	-0.0119	V	G. Samolyk	0.0002
EE Cep	56893.96	11	3.13	B	G. Samolyk	0.03	AI Dra	57208.6988	11609	0.0331	V	G. Samolyk	0.0001
EE Cep	56894.05	11	3.22	V	G. Samolyk	0.04	CM Dra	57174.7349	11259	0.0034	V	B. Harris	0.0002
EE Cep	56894.32	11	3.49	R	G. Samolyk	0.03	S Equ	57241.4561	4262	0.0676	V	L. Corp	0.0002
EE Cep	56894.34	11	3.51	I	G. Samolyk	0.04	S Equ	57313.6146	4283	0.0681	V	G. Samolyk	0.0001
EG Cep	57214.7673	26845	0.0118	V	G. Samolyk	0.0002	WW Gem	57326.9051	25321	0.0358	V	K. Menzies	0.0002
EG Cep	57215.8572	26847	0.0124	V	B. Harris	0.0001	AF Gem	57320.9298	24253	-0.0696	V	G. Samolyk	0.0001
EG Cep	57225.6607	26865	0.0127	V	N. Simmons	0.0001	Z Her	57214.8254	11052	-0.0198	V	S. Cook	0.0007
GK Cep	57246.6615	19817	0.1319	V	N. Simmons	0.0003	RX Her	57257.6040	13543	0.0000	V	G. Samolyk	0.0002
RW Com	57157.6070	72195	0.0034	V	K. Menzies	0.0001	SZ Her	57221.6186	18772	-0.0275	V	G. Samolyk	0.0001
RZ Com	57128.7686	65852	0.0491	V	K. Menzies	0.0001	TT Her	57208.6401	18872	0.0440	V	G. Samolyk	0.0002
SS Com	57139.6292	77851	0.8570	V	N. Simmons	0.0001	TT Her	57271.5745	18941	0.0452	V	K. Menzies	0.0003
SS Com	57140.6619	77853.5	0.8577	V	N. Simmons	0.0001	TU Her	57225.6993	5807	-0.2346	V	G. Samolyk	0.0001
CC Com	57116.7393	79675	-0.0231	V	G. Samolyk	0.0001	AK Her	57227.4387	35682.5	0.0195	V	L. Corp	0.0002
CC Com	57116.8510	79675.5	-0.0217	V	G. Samolyk	0.0002	CK Her	57197.6793	10109	0.2727	V	G. Samolyk	0.0001
LR Com	57126.5591	5161	0.0113	V	L. Corp	0.0001	CT Her	57140.8490	8183	0.0120	V	G. Samolyk	0.0001
U CrB	57138.8546	11700	0.1272	V	G. Samolyk	0.0001	CT Her	57251.6051	8245	0.0129	V	K. Menzies	0.0002
RW CrB	57128.6753	22545	0.0001	V	K. Menzies	0.0001	V718 Her	57187.2973	33959	-0.0199	C	Y. Ogmen	0.0002
RV Crv	57139.6721	21559.5	-0.0935	V	G. Samolyk	0.0002	AV Hya	57140.5975	29949	-0.1108	V	G. Samolyk	0.0002
Y Cyg	57214.8163	15940	-0.1477	V	G. Samolyk	0.0001	DK Hya	57116.6859	27347	0.0025	V	G. Samolyk	0.0001
Y Cyg	57226.8014	15944	-0.1480	V	G. Samolyk	0.0001	SW Lac	57255.6272	37354.5	-0.0894	V	G. Samolyk	0.0001
Y Cyg	57256.7719	15954	-0.1408	V	S. Cook	0.0006	SW Lac	57255.7890	37355	-0.0879	V	G. Samolyk	0.0001
SW Cyg	57205.7558	3354	-0.3533	V	G. Samolyk	0.0001	SW Lac	57256.4313	37357	-0.0871	V	L. Corp	0.0001
WW Cyg	57195.7851	5069	0.1280	V	G. Samolyk	0.0001	SW Lac	57256.5903	37357.5	-0.0884	V	L. Corp	0.0002
ZZ Cyg	57150.8169	19329	-0.0673	V	K. Menzies	0.0001	SW Lac	57270.8634	37402	-0.0874	V	K. Menzies	0.0001
ZZ Cyg	57281.5681	19537	-0.0683	V	K. Menzies	0.0001	SW Lac	57286.5788	37451	-0.0873	V	K. Menzies	0.0001
AE Cyg	57211.8266	13027	-0.0038	V	G. Samolyk	0.0003	SW Lac	57312.3951	37531.5	-0.0891	V	L. Corp	0.0002
BR Cyg	57235.7399	11779	0.0014	V	G. Samolyk	0.0002	VX Lac	57233.7866	11145	0.0827	V	G. Samolyk	0.0001

Table continued on next page

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>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>Error</i> <i>(day)</i>
AR Lac	57278.7270	7909	-0.0511	V	N. Simmons	0.0002	ST Per	57317.7023	5619	0.3123	V	G. Samolyk	0.0001
AW Lac	57251.6578	26799	0.2040	V	N. Simmons	0.0002	IU Per	57261.8442	13594	0.0090	V	N. Simmons	0.0002
CO Lac	57213.8617	19245	0.0056	V	G. Samolyk	0.0002	KW Per	57258.8571	15951	0.0153	V	G. Samolyk	0.0001
CO Lac	57234.6656	19258.5	-0.0103	V	G. Samolyk	0.0001	V432 Per	57278.7460	66573	0.0188	V	G. Samolyk	0.0001
CO Lac	57261.6699	19276	0.0053	V	N. Simmons	0.0003	V876 Per	56984.2090	17213.5	0.0135	C	Y. Ogmen	0.0001
XY Leo	57145.6201	42489	0.1363	V	K. Menzies	0.0003	V876 Per	56984.3684	17214	0.0130	C	Y. Ogmen	0.0001
XZ Leo	57128.5702	24815	0.0657	V	K. Menzies	0.0001	RV Psc	57280.7574	59386	-0.0588	V	G. Samolyk	0.0002
RR Lep	57320.9128	29433	-0.0415	V	G. Samolyk	0.0002	U Sge	57234.7021	11863	0.0036	V	G. Samolyk	0.0001
UZ Lyr	57227.6347	7158	-0.0368	V	N. Simmons	0.0001	U Sge	57234.7025	11863	0.0040	V	N. Simmons	0.0001
UZ Lyr	57227.6356	7158	-0.0359	V	G. Samolyk	0.0002	RS Ser	57224.7494	37287	0.0515	V	S. Cook	0.0002
EW Lyr	57256.6587	15783	0.2666	V	G. Samolyk	0.0002	AO Ser	57213.6847	26247	-0.0118	V	G. Samolyk	0.0001
FL Lyr	57234.6606	8729	-0.0017	V	G. Samolyk	0.0001	CC Ser	57221.6740	38253.5	1.0608	V	G. Samolyk	0.0001
U Oph	57197.7539	7620	-0.0103	V	G. Samolyk	0.0003	RW Tau	57326.8920	4205	-0.2657	V	K. Menzies	0.0001
SX Oph	57197.7003	11534	-0.0027	V	G. Samolyk	0.0001	TY Tau	57295.9212	33511	0.2660	V	R. Sabo	0.0002
V508 Oph	57213.6839	35184	-0.0254	V	G. Samolyk	0.0001	WY Tau	57310.8106	28738	0.0617	V	N. Simmons	0.0001
V508 Oph	57217.4774	35195	-0.0246	V	L. Corp	0.0002	WY Tau	57310.8111	28738	0.0622	V	K. Menzies	0.0002
V508 Oph	57273.3342	35357	-0.0241	V	L. Corp	0.0004	CT Tau	57313.8851	17860	-0.0631	V	N. Simmons	0.0001
V508 Oph	57294.3650	35418	-0.0256	V	L. Corp	0.0002	EQ Tau	57294.8832	50041.5	-0.0318	V	R. Sabo	0.0001
V839 Oph	57139.8049	40810	0.2930	V	G. Samolyk	0.0001	EQ Tau	57326.7989	50135	-0.0321	V	K. Menzies	0.0001
V839 Oph	57223.6495	41015	0.2936	V	G. Samolyk	0.0001	V Tri	57307.8501	56106	-0.0059	V	G. Samolyk	0.0002
V839 Oph	57273.5492	41137	0.2958	V	K. Menzies	0.0001	X Tri	57308.8304	15240	-0.0870	V	S. Cook	0.0005
V1010 Oph	57220.7364	27642	-0.1737	V	S. Cook	0.0005	RS Tri	57319.8183	10152	-0.0621	V	K. Menzies	0.0002
V1010 Oph	57226.6890	27651	-0.1739	V	G. Samolyk	0.0001	RV Tri	57256.8691	14892	-0.0401	V	N. Simmons	0.0001
ER Ori	57309.8619	37041.5	0.1240	V	R. Sabo	0.0001	W UMi	57205.7397	13828	-0.1906	V	G. Samolyk	0.0002
ER Ori	57314.9436	37053.5	0.1249	V	G. Samolyk	0.0001	VV Vir	57195.6435	58221	-0.0452	V	G. Samolyk	0.0003
FZ Ori	56620.7879	31492	-0.0484	V	N. Simmons	0.0001	AG Vir	57152.4274	18237	-0.0089	V	L. Corp	0.0004
FZ Ori	57314.9707	33227.5	-0.0424	V	G. Samolyk	0.0003	AH Vir	57134.3681	27777	0.2723	V	L. Corp	0.0004
GU Ori	57316.8890	30269	-0.0572	V	R. Sabo	0.0006	NY Vir	57126.4386	68336.5	-0.0020	R	L. Corp	0.0003
GU Ori	57320.8881	30277.5	-0.0589	V	G. Samolyk	0.0003	AW Vul	57280.6003	13634	-0.0232	V	G. Samolyk	0.0001
U Peg	56620.6018	53655.5	-0.1519	V	N. Simmons	0.0001	AW Vul	57322.5361	13686	-0.0229	V	K. Menzies	0.0001
U Peg	57234.8621	55294.5	-0.1584	V	G. Samolyk	0.0001	AY Vul	57222.6541	6026	-0.1273	V	G. Samolyk	0.0002
U Peg	57305.5067	55483	-0.1601	V	L. Corp	0.0002	AY Vul	57280.5514	6050	-0.1287	V	K. Menzies	0.0001
BB Peg	57246.8984	37296	-0.0173	V	R. Sabo	0.0002	BE Vul	57250.7013	11043	0.0984	V	G. Samolyk	0.0002
BB Peg	57279.6150	37386.5	-0.0167	V	G. Samolyk	0.0002	BE Vul	57278.6389	11061	0.0992	V	G. Samolyk	0.0001
BB Peg	57279.7936	37387	-0.0188	V	G. Samolyk	0.0002	BG Vul	56885.3419	79650	0.0219	C	Y. Ogmen	0.0001
BB Peg	57281.6022	37392	-0.0177	V	N. Simmons	0.0001	BO Vul	57224.6740	10913	-0.0254	V	G. Samolyk	0.0001
BB Peg	57310.7025	37472.5	-0.0183	V	S. Cook	0.0004	BS Vul	57224.6505	29315	-0.0311	V	G. Samolyk	0.0001
BG Peg	57279.8135	6017	-2.2207	V	G. Samolyk	0.0002	BS Vul	57314.6086	29504	-0.0317	V	G. Samolyk	0.0002
BX Peg	57234.8262	46500	-0.1181	V	G. Samolyk	0.0001	BT Vul	57227.6348	19125	0.0048	V	G. Samolyk	0.0001
BX Peg	57326.5230	46827	-0.1189	V	K. Menzies	0.0001	BT Vul	57307.5185	19195	0.0045	V	K. Menzies	0.0001
DI Peg	57251.8222	16936	0.0049	V	K. Menzies	0.0001	BU Vul	57224.8574	41637	0.0129	V	B. Harris	0.0001
GP Peg	57309.6288	16473	-0.0529	V	N. Simmons	0.0001	BU Vul	57235.6691	41656	0.0137	V	G. Samolyk	0.0001
Z Per	57312.6515	3813	-0.2906	V	G. Samolyk	0.0001	BU Vul	57244.7735	41672	0.0142	V	B. Harris	0.0001
RT Per	57246.8540	28103	0.0985	V	N. Simmons	0.0001	CD Vul	57233.6378	15993	-0.0010	V	G. Samolyk	0.0001
RT Per	57314.8077	28183	0.1002	V	G. Samolyk	0.0002	CD Vul	57285.6025	16069	-0.0009	V	G. Samolyk	0.0002
RV Per	57313.8542	7736	0.0022	V	G. Samolyk	0.0002	ER Vul	57317.6989	24546	0.0193	V	R. Sabo	0.0004