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CCD MINIMA FOR SELECTED ECLIPSING BINARIES IN 2015

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Observatory and telescope:
Sylvester Robotic Observatory (SyRO): 33 cm f/4.5 Newtonian on a Paramount ME

Detector:	SyRO: SBIG ST-10XME, 6.8' pixels, 34.4" × 23.2" FOV, $-10^{\circ} < T < -30^{\circ}\text{C}$
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Method of data reduction:
Bias and dark subtraction, flat-fielding using light-box flats; aperture photometry—all using MIRA, by Mirametrics. Check stars were used throughout.

Method of minimum determination:
Digital tracing paper method, bisection of chords, curve fitting, and (occasionally) Kwee and van Woerden (1956)

Times of minima:						
Star name	Time of min. HJD 2400000+	Error	Type	Filter	$O - C$ [day]	Rem.
V0566 And	57352.6129	0.0003	EW	c	-0.0348	
G2822-1558 And	57353.6523	0.0002	EA	c	-0.0001	
RX Ari	57308.7469	0.0004	EA/DM	R	-0.0109	
AH Aur	57372.73435	0.0005	EW/DW	R	-0.0121	
V0599 Aur	57373.59485	0.0005	EW	c	-0.0170	
TY Boo	57099.7924	0.0002	EW/KW	c	-0.0037	
TZ Boo	57081.9603	0.0002	EW/KW	R	0.0020	
FI Boo	57130.7838	0.0003	EW	R	-0.0070	
KP Boo	57053.9405	0.0004	EB	R	0.0108	
QT Boo	57124.7948	0.0005	EW	c	0.0000	
AO Cam	57308.9177	0.0003	EW/KW	V	0.0019	
FN Cam	57352.9537	0.0001	EW	V	0.0012	
V0335 Cam	57315.77	0.01	EA	c	-0.0003	
V0403 Cam	57352.7429	0.0003	EW	c	0.0252	
CW Cas	57351.6131	0.0002	EW/KW	R	-0.0008	
V0608 Cas	57254.9347	0.0001	E	c	-0.0011	
V1063 Cas	57355.682	0.003	EW	c	0.0799	
V1160 Cas	57256.8831	0.0002	EA	c	-0.0008	
V0737 Cep	57182.8999	0.0001	EW	c	-0.0017	
V0814 Cep	57144.8828	0.001	na	c	-0.0307	
V0849 Cep	57334.6034	0.0002	EA	c	0.0018	
V0959 Cep	57310.6359	0.0006	EW/DW	c	-0.0255	
TX Cnc	57350.9761	0.0001	EW/KW	R	-0.0018	
EH Cnc	57353.846	0.002	EW	c	-0.0010	
IT Cnc	57071.7262	0.0003	EW	c	-0.0030	
G1936-0040 Cnc	57372.87253	0.0005	ESD-EC	c	0.0026	
RW Com	57096.8470	0.0003	EW/KW	R	0.0003	
CC Com	57071.8296	0.0001	EW/KW	c	-0.0013	
LR Com	57084.8813	0.0003	EA	c	0.0054	
YY CrB	57074.9458	0.0001	EW	V	0.0056	
AS CrB	57097.8485	0.0003	EW	c	0.0090	
BO CVn	57105.7589	0.0002	EW	R	-0.0013	
DL CVn	57121.7205	0.0002	EB	c	0.0005	
DX CVn	57053.8386	0.0004	EW?	R	-0.0123	
FQ CVn	57372.97511	0.0007	EW?	c	-0.0147	
FV CVn	57119.8307	0.0002	EW?	c	-0.0014	
GM CVn	57352.0223	0.0004	EW	c	0.0008	
G2530-1069 CVn	57346.9728	0.0003	EW	c	0.0003	
G2530-1069 CVn	57119.7279	0.0002	EW	c	0.0018	
V0628 Cyg	57164.886	0.002	EW	c	0.0015	
V1034 Cyg	57213.8702	0.0005	EB/SD:	I	-0.0021	
V1191 Cyg	57170.8519	0.0005	EW/KW	c	-0.0001	
V2477 Cyg	57153.8529	0.0002	EW	VRI	0.0003	
V2477 Cyg	57152.9192	0.0001	EW	VRI	0.0003	
V2477 Cyg	57150.8966	0.0003	EW	VRI	0.0012	
V2477 Cyg	57145.9165	0.0001	EW	R	0.0021	
V2517 Cyg	57118.9692	0.0002	EA	R	0.0048	

Times of minima:						
Star name	Time of min. HJD 2400000+	Error	Type	Filter	$O - C$ [day]	Rem.
Z Dra	57068.6705	0.0002	EA/SD	VRI	0.0018	
BL Dra	57179.8114	0.0004	EW	c	0.0000	
BW Dra	57120.7280	0.002	EW/KW	V	-0.0375	
EF Dra	57159.8118	0.0003	EW	R	0.0116	
V0341 Dra	57121.8405	0.0002	EA	R	-0.0007	
V0402 Dra	57141.949	0.002	EW	R	0.0000	
G3897-1017 Dra	57151.7917	0.0003	EW	c	0.0036	
G3913-0160 Dra	57135.9436	0.0002	E	c	0.0000	
G3929-1500 Dra	57158.7691	0.0003	EW	c	-0.0404	
G4421-0400 Dra	57150.7630	0.0002	EW	c	-0.0081	
G4448-1301 Dra	57154.8071	0.0002	EW	c	-0.0004	
V0402 Gem	57365.7279	0.0004	EW	c	0.0073	
G1886-1869 Gem	57344.8993	0.0002	EC	c	0.0059	
IT Her	57154.9044	0.0003	E	c	-0.0032	
V0728 Her	57130.9124	0.0003	EW/KW	c	-0.0012	
V0829 Her	57131.8304	0.0003	EW/KW	c	0.0019	
V0857 Her	57075.9632	0.0005	EW	c	0.0000	
V0921 Her	57119.9522	0.0002	EB	R	0.0139	
V1023 Her	57122.822	0.002	EW	c	-0.0023	
V1047 Her	57118.8694	0.0002	EW	c	0.0008	
V1067 Her	57122.9473	0.0003	EW	c	0.0114	
V1101 Her	57183.8328	0.0001	EW	c	0.0003	
V1103 Her	57097.9779	0.0003	EW	c	0.0112	
V1104 Her	57157.7794	0.0002	EW	c	-0.0038	
V1175 Her	57120.8844	0.0004	EW	c	0.0204	
V1197 Her	57156.7867	0.0002	EW	c	0.0005	
V1261 Her	57147.8060	0.0003	EW?	c	-0.0091	
G2093-1834 Her	57169.7898	0.0003	EB	c	0.0000	
UV Leo	57078.8006	0.0001	EA/DW	V	-0.0002	
CE Leo	57101.7420	0.0002	EW/KW	c	0.0118	
G1965-0735 Leo	57084.6568	0.0002	EB	R	-0.0057	
XX LMi	57081.6606	0.0003	EW	c	-0.0066	
V0653 Lyr	57144.806	0.0003	EW	c	0.0026	
V2790 Ori	57346.8874	0.0002	EW/KW	c	0.0073	
BN Peg	57224.7770	0.0005	EA	VRI	-0.0032	
BN Peg	57254.7348	0.0003	EA	VRI	-0.0039	
KR Per	57354.789	0.002	EB/KE	c	-0.0053	
KW Per	57286.7954	0.0003	EB/SD	c	-0.0007	
V0432 Per	57310.754	0.001	EW/DW	VRI	0.0011	
CP Psc	57354.615	0.001	EB:	R	0.0036	
GW Psc	57332.7228	0.0002	EW	c	0.0115	
HL Psc	57365.5982	0.0002	EB/RS	c	0.0017	
HN Psc	57258.8694	0.0007	EW	c	-0.0422	
HO Psc	57320.7440	0.0002	EW	c	-0.0005	
AU Ser	57084.9700	0.0001	EW/KW	c	0.0026	
AU Ser	57135.7953	0.0003	EW/KW:	c	0.0031	
EQ Tau	57326.800	0.001	EW/DW	c	0.0013	

Times of minima:						
Star name	Time of min. HJD 2400000+	Error	Type	Filter	$O - C$ [day]	Rem.
V1241 Tau	57351.7894	0.0002	EA/SD	VRI	-0.0054	
G1804-0539 Tau	57346.7745	0.0002	E	c	-0.0037	
UX UMa	57081.8536	0.0002	EA/WD	c	0.0011	
ES UMa	57097.6854	0.0001	EW	R	0.0004	
HH UMa	57344.996	0.002	EW?	c	0.0028	
NU UMa	57079.794	0.003	EA	V	-0.0024	
OQ UMa	57078.8912	0.0002	EW	c	-0.0054	
G3807-0759 UMa	57089.7522	0.0002	EW+EA	R	0.0133	
WW UMi	57080.8015	0.0004	EB	c	0.0164	
G0289-0144 Vir	57131.7373	0.0005	EW	c	0.0000	

Remarks:

To save space, GSC star names have been shortened to a leading “G” only; times of minimum are heliocentric Julian dates with the leading 24 removed. $O - C$ values were computed using elements computed from the $O - C$ database listed in the references (Nelson, 2015).

Acknowledgements:

Thanks are due to Environment Canada for the website satellite views (see reference below) that were essential in predicting clear times for observing runs in this cloudy locale. Thanks are also due to Attila Danko for his Clear Sky Charts, (see below). This research has made use of the SIMBAD database, operated at CDS, Strasbourg, France

References:

- Danko, A., Clear Sky Charts, <http://cleardarksky.com/>
 Kwee, K.K., van Woerden, H., 1956, B.A.N. 12, (464), 327
 Nelson, R.H., 2015, O-C Files, <http://www.aavso.org/bob-nelsons-o-c-files>
 Satellite Images for North America, <http://weather.gc.ca/>