

COMMISSIONS 27 AND 42 OF THE IAU  
INFORMATION BULLETIN ON VARIABLE STARS

Number 6131

Konkoly Observatory  
Budapest  
7 February 2015

HU ISSN 0374 – 0676

CCD MINIMA FOR SELECTED ECLIPSING BINARIES IN 2014

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

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

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

<b>Times of minima:</b>					
Star name	Time of min. HJD 2400000+	Error	Type	Filter	Rem.
AD And	56955.6161	0.0001	II	c	-0.0016
G2837-1343 And	56921.7652	0.0003	II	c	0.0002
BO Ari	56928.7461	0.0002	II	R	0
EP Aur	56955.815	0.002	II	c	-0.0074
V0562 Aur	56661.7792	0.002	I	c	0.0002
V0644 Aur	56661.6217	0.0003	I	c	-0.0007
TY Boo	56692.8944	0.0002	I	c	-0.0018
GN Boo	56697.9477	0.0001	II	c	-0.0005
HH Boo	56690.9585	0.0002	II	c	0.0014
PU Boo	56692.9662	0.0005	II	c	0
V0339 Boo	56691.9254	0.0003	II	c	0

<b>Times of minima:</b>					
Star name	Time of min. HJD 2400000+	Error	Type	Filter	Rem.
LO Com	56696.88	0.0003	I	c	0.001
V0403 Cam	56676.6103	0.0003	II	c	0
V0405 Cam	56964.7495	0.0004	I	c	0
V0473 Cam	56674.6461	0.0004	I	c	0
V0474 Cam	56695.6407	0.0002	II	c	0.0001
V0517 Cam	56688.8892	0.0002	I	c	0.0001
V0608 Cas	57007.6716	0.0002	I	c	0
V1137 Cas	56917.7017	0.0002	I	c	0.0027
UZ CMi	56697.7449	0.0004	I	c	0.0009
EH Cnc	56691.6848	0.0003	II	c	0.0005
HN Cnc	56695.7625	0.0004	II	c	0.0012
IL Cnc	56677.791	0.0002	I	c	0.0009
IT Cnc	56703.7034	0.0008	I	c	-0.001
DX CVn	56693.9601	0.0005	I	c	0.0006
EY CVn	56697.8519	0.0004	I	c	0.0006
GM CVn	57021.002	0.0002	II	<i>R</i>	-0.0003
CV Cyg	56848.807	0.002	II	<i>VRI</i>	-0.0012
V1034 Cyg	56810.8846	0.0005	I	<i>VRI</i>	-0.0016
V1941 Cyg	56929.7176	0.0004	I	c	0
V2545 Cyg	56801.9137	0.0005	I	c	-0.0021
LS Del	56866.819	0.0007	I	<i>VRI</i>	-0.0004
LS Del	56852.8119	0.0007	II	<i>VRI</i>	0.0004
DG Dra	56782.9385	0.0005	I	<i>R</i>	0.0047
FX Dra	56788.794	0.002	II	<i>VRI</i>	0.0026
NV Dra	56693.7686	0.0002	I	c	0.0004
OX Dra	56695.9017	0.0001	I	c	-0.0008
SX Gem	56662.705	0.002	I	c	0.005
V0348 Gem	57021.7189	0.0004	II	<i>R</i>	0
V0404 Gem	56693.6557	0.0003	I	c	0.0002
V0405 Gem	56693.6365	0.0005	I	c	-0.0009
V0435 Gem	56676.7644	0.001	II	c	0.0004
V1023 Her	56687.9718	0.0002	II	c	0
V1094 Her	56801.8301	0.0002	I	c	0.0004
V1302 Her	56794.8016	0.0005	II	c	0.0024
UW Hya	57007.9233	0.0003	I	c	0.001
AV Hya	56687.843	0.001	0	c	0.0022
SW Lac	56794.9078	0.0005	I	<i>VRI</i>	-0.0002
UZ Leo	56689.878	0.0003	I	c	0.0059
AP Leo	56694.8847	0.0002	I	<i>R</i>	0.0005
RT LMi	57022.8386	0.0003	II	<i>R</i>	-0.0009
FI Lyn	56698.6491	0.0003	II	c	-0.0007
V1833 Ori	56925.9474	0.0007	I	<i>R</i>	0
V1847 Ori	57007.7649	0.0002	I	c	-0.0003
V1848 Ori	56696.6346	0.0001	I	c	0.0013
G1721-1141 Peg	56951.6555	0.0002	I	c	0.001

<b>Times of minima:</b>					
Star name	Time of min. HJD 2400000+	Error	Type	Filter	Rem.
IM Per	56927.8424	0.0002	II	<i>R</i>	0.0008
V0432 Per	56675.6133	0.0005	II	<i>VRI</i>	-0.0003
V0873 Per	56658.6316	0.0002	II	<i>R</i>	-0.0009
EQ Tau	56929.8123	0.0003	I	<i>c</i>	-0.0002
V1295 Tau	56935.8288	0.0003	I	<i>c</i>	0
AV Tri	56928.8622	0.0002	I	<i>c</i>	0
HH UMa	57021.8797	0.0002	II	<i>R</i>	0.004
KM UMa	57020.9033	0.0004	I	<i>R</i>	-0.0009
V0354 UMa	57022.9616	0.0005	II	<i>R</i>	-0.001
V0354 UMa	57023.11045	0.001	I	<i>R</i>	0.001
AW Vir	56688.9961	0.0003	I	<i>c</i>	0.0001

**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, 2014).

**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, *BAN*, **12**, (464), 327  
 Nelson, R.H. 2014, Bob Nelson’s O–C Files, <http://www.aavso.org/bob-nelsons-o-c-files>  
 Satellite Images for North America, [http://weather.gc.ca/satellite/index\\_e.html](http://weather.gc.ca/satellite/index_e.html)