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A LIST OF MINIMA AND MAXIMA TIMINGS

ANTON PASCHKE

anton@paschke.com

Abstract:
The list contains minima of eclipsing and maxima of pulsating stars,
it continues the list published in OEJV 0130.

Instruments used
The following telescopes and observatories have been used:
28cm+G2 = 28 cm Newton, G2-402 camera, observatory in Eggerberg, Switzerland
Car+G1 = Carenar wide angle, G1 camera, Eggerberg or Cha das Caldeiras, Cabo Verde
50mm+G1 = 50/135 mm teleobjective, G1 camera, Eggerberg or Cha das Caldeiras, Cabo Verde
50mm+ST7 = 50/135 mm teleobjective, SBIG ST-7 camera, Ca del Monte, Italy, remote

Coordinates
Coordinates are all J2000.
The coordinates of stars identified in the GCVS and NSV are not repeated here.
The following stars identified by Guide Star Catalog have been observed:

GSC 02771-01085	And	23:50:46.30	+33:21:04.3
GSC 02837-01343	And	02:00:09.13	+43:02:42.5
GSC 03229-01054	And	23:16:52.99	+44:29:18.3
GSC 03627-01580	And	23:10:12.46	+47:34:14.9
GSC 03474-00461	Boo	14:52:40.22	+45:39:40.9
GSC 04360-01210	Cam	07:19:14.98	+69:03:16.1
GSC 04686-02061	Cet	01:59:37.00	-03:31:00.0
GSC 02040-01409	CrB	15:57:33.60	+28:32:23.0
GSC 06431-00180	For	01:52:00.00	-28:00:24.0
GSC 07552-00260	For	02:31:52.00	-38:37:24.0
GSC 00267-00253	Leo	11:27:23.00	+04:42:24.0
GSC 01437-00805	Leo	11:18:19.31	+16:28:04.8
GSC 01965-00735	Leo	09:36:31.37	+28:20:23.3
GSC 04922-00195	Leo	11:16:36.42	-01:54:12.2
GSC 00285-01075	Vir	12:24:18.00	+03:51:34.0

We (Radek Dreveny, Anton Paschke, Friedhelm Hund) maintain our own list of newly detected variable stars.
Observations of the following star are reported here.

RafV06	Ser	15:23:27.50	+03:51:34

Coordinates of most RafV stars are determined by visual comparison of ccd image
and ESO Digital Sky Survey. They are certainly accurate enough to identify
the star.

Elements

CC	And	max	34604.95	0.124908	30.06.2009
FM	And	max	38641.46	0.695495	04.12.1999
V 363	And	min	48500.4	1.277973	23.10.2011
V 392	And	min	48035.11	4.046275	14.11.2005
G2771.1085	And	max	51402.87	0.53393	14.02.2006

G2837.1343	And	min	53288.51	0.266628	29.08.2007
G3229.1054	And	min	55795.14	0.7426	31.08.2007
G3627.1580	And	min	48164.65	0.937905	24.12.2006
V 719	Aql	min	28753.51	6.751045	18.08.2011
V 882	Aql	max	38616.42	0.509615	03.10.2011
V1713	Aql	min	52481.64	0.531737	20.01.2005
QQ	Ara	max	52482.58	0.5486	20.10.2011
TY	Ari	max	51166.33	0.329711	01.01.2011
AG	Ari	min	48500.27	1.963115	12.10.2007
BM	Ari	min	51463.68	0.484967	05.11.2010
BN	Ari	min	51525.67	0.299374	18.01.2011
BQ	Ari	min	51382.9	0.282335	01.02.2011
CD	Ari	max	51593.75	0.32831	14.02.2006
CI	Ari	max	51437.77	0.45534	14.02.2006
CL	Ari	min	51475.67	0.99361	06.09.2011
HP	Aur	min	37345.36	1.42282	25.09.1999
V 425	Aur	min	48500.83	1.568583	27.07.1997
SU	Boo	min	21071.37	1.56125	28.06.2011
SW	Boo	max	52368.59	0.513548	25.08.2005
G3474.0461	Boo	max	51325.75	0.50075	15.06.2006
AO	Cam	min	44559.96	0.329904	14.01.2010
G4360.1210	Cam	min	51441.18	0.328222	15.06.2006
Y	Cnc	max	48647.75	0.54095	09.03.2011
RY	Cnc	min	46762.6	1.092946	10.02.2011
WW	Cnc	min	46005.6	1.115953	09.02.2011
X	CMi	max	28257.27	0.571396	01.01.2011
Y	CMi	max	48687.34	0.486607	08.05.2003
RV	CMi	max	47566.42	0.625446	19.02.2011
TX	CMi	min	36598.61	0.389217	01.06.1996
TZ	CMi	min	25217.53	1.776814	07.03.2009
UY	CMi	min	53046.64	4.4499	11.10.2007
UY	CMi	min	25532.63	4.4521	26.12.2006
AD	CMi	max	42429.46	0.122975	20.04.2002
del	Cap	min	35656.91	1.022769	01.06.1996
ST	Cet	max	25197.34	0.526534	04.10.2011
SU	Cet	max	25197.35	0.542643	01.06.1996
GP	Cet	min	51466.87	3.4885	10.02.2006
G4686.2061	Cet	min	51904.43	0.63152	27.10.2002
G2040.1409	CrB	max	55348.11	0.31509	15.08.2010
RT	Equ	max	36809.46	0.444832	16.08.2009
RZ	Equ	min	37161.37	1.96094	05.11.2007
SV	Eri	max	47176.84	0.713881	16.10.2011
UZ	Eri	max	27390.3	0.648788	22.10.2011
BU	Eri	min	32244.33	0.843094	01.12.2011
BV	Eri	min	46032.23	0.507655	16.02.2011
BW	Eri	min	43448.68	0.638486	12.11.2006
BZ	Eri	min	25558.45	0.66417	01.06.1996
CW	Eri	min	41267.68	2.728372	02.12.2011
SS	For	max	38668.95	0.495428	30.11.2011

XZ	For	min	48500.07	0.308127	16.11.2006
NSV 01011	For	min	51869.45	0.72606	27.11.2005
G6431.0180	For	min	51869.26	0.44384	27.10.2002
G7552.0260	For	min	51869.09	0.58873	27.10.2002
V 878	Her	min	49922.71	0.529475	12.12.2006
G0267.0253	Leo	min	52038.87	0.446457	18.04.2009
G1437.0805	Leo	min	54850.81	2.00407	30.03.2011
G1965.0735	Leo	min	52789.49	0.379498	08.02.2011
G4922.0195	Leo	min	51871.05	0.628852	10.02.2011
WZ	Oph	min	35648.78	4.183506	01.06.1996
V 709	Oph	min	48092.37	3.045175	30.05.2011
V1016	Oph	min	46907.55	0.407161	27.07.2009
CM	Ori	max	25298.44	0.655922	29.09.2011
FR	Ori	min	27862.16	0.883163	22.05.2007
V 392	Ori	min	25506.62	0.659284	01.06.1996
WZ	Peg	min	42960.47	3.42356	15.07.2007
DI	Peg	min	45196.49	0.711817	17.09.2011
EE	Peg	min	45563.89	2.628214	01.06.1996
EH	Peg	min	51309.51	2.37439	21.09.2011
V 421	Peg	min	48254.13	3.087555	11.10.2007
IQ	Per	min	44290.35	1.74357	01.06.1996
EX	Psc	min	53648.26	0.289483	29.09.2011
FR	Psc	max	51508.8	0.45577	14.02.2006
U	Sge	min	17130.41	3.380618	11.08.2007
CX	Ser	min	31213.48	0.997289	01.02.2011
RafV064	Ser	min	54271.21	0.884	25.09.2007
TX	UMa	min	44998.15	3.063295	10.04.2011
GZ	UMa	min	51556.83	6.541975	27.04.2011
W	UMi	min	19487.85	1.701151	13.09.2007
TY	UMi	min	48500.28	1.7248	27.07.1997
G0285.1075	Vir	min	51259.61	0.354316	27.09.2007
BW	Vul	max	45177.62	0.201044	08.06.2011
BW	Vul	min	45177.71	0.201044	08.06.2011
DR	Vul	min	40300.7	2.250888	15.09.2007

The elements, in HJD indeed, are given for maxima in the case of pulsating stars and for primary minima in the case of eclipsing stars. The only exception is BW Vul, where minima are sharper then maxima.
No elements are given for minima of RR Lyrae stars and secondary minima of eclipsing stars, even in the case that the secondary minima are displaced.

If the star is eclipsing and mentioned in the O-C GATE, then the elements are identical to those of the O-C GATE, state November 2011.
The last column is the date when the elements where inserted into the database.

Minima and Maxima timings

The table contains the following columns:

01 Star Name. As taken from GCVS, NSV, GSC or the lists mentioned above.
02 Constellation
03 Kind of extremum. P = primary, S = secondary, Max = maximum (RR Lyrae star)
Min = minimum of RR Lyr stars, usefull to calculate (M-m)/P
04 Julian heliocentric time observed, add 2 400 000.0
It is based on UTC, leap seconds included.
05 Error estimated
06 O-C value. 0 if no elements are given.
07 Number of measurements (ccd images) used. 0 if entire lightcurve was used
or the observer did not communicate the value.
08 Color. ccd = unfiltered ccd, V = Johnson
09 Instrument, see list above

CC	And	max	24	55797.596	0.01	+0.0073	458	ccd	50mm+G1
FM	And	max	24	55856.374	0.007	+0.0258	140	ccd	28cm+G2
V 363	And	p	24	55856.413	0.01	+0.0024	273	ccd	50mm+G1
V 392	And	p	24	55852.501	0.008	-0.0093	200	ccd	50mm+ST7
G2771.1085	And	max	24	55833.364	0.006	-0.0571	143	V	28cm+G2
G2837.1343	And	p	24	55855.276	0.003	-0.0637	60	ccd	28cm+G2
G2837.1343	And	s	24	55855.407	0.003	-0.066	134	ccd	28cm+G2
G3229.1054	And	s	24	55795.509	0.01	-0.0006	1018	V	28cm+G2
G3229.1054	And	p	24	55820.389	0.01	-0.0014	312	V	28cm+G2
G3627.1580	And	p	24	55827.333	0.012	-0.0036	223	ccd	50mm+G1
G3627.1580	And	p	24	55856.404	0.006	-0.0077	102	ccd	50mm+ST7
V 719	Aql	p	24	55791.423	0.006	-0.0192	222	ccd	28cm+G2
V 882	Aql	max	24	55837.333	0.003	-0.0008	51	ccd	28cm+G2
V1713	Aql	p	24	55803.38	0.004	-0.02	263	ccd	28cm+G2
QQ	Ara	max	24	52482.58	0	+0	0	V	Asas
TY	Ari	max	24	55562.422	0.008	+0.0552	258	ccd	28cm+G2
AG	Ari	p	24	55889.433	0.01	-0.0039	109	ccd	50mm+G1
BM	Ari	p	24	55505.388	0	-0.0078	262	ccd	28cm+G2
BM	Ari	p	24	55790.547	0.003	-0.0094	272	ccd	28cm+G2
BN	Ari	p	24	55578.301	0.003	+0.0042	104	ccd	28cm+G2
BN	Ari	p	24	55836.658	0.003	+0.0014	99	ccd	28cm+G2
BQ	Ari	p	24	55593.361	0.002	-0.0029	106	ccd	28cm+G2
CD	Ari	max	24	55835.528	0.006	+0.0128	130	ccd	28cm+G2
CI	Ari	max	24	55803.476	0.005	-0.0939	178	ccd	28cm+G2
CL	Ari	p	24	55839.599	0.007	-0.0061	289	V	28cm+G2
HP	Aur	p	24	55803.606	0.003	+0.0011	216	ccd	28cm+G1
V 425	Aur	p	24	55857.49	0.01	+0.0067	283	ccd	50mm+ST7
SU	Boo	p	24	55740.488	0.003	-0.0025	183	ccd	28cm+G2
SW	Boo	max	24	55611.647	0.003	+0.0014	178	ccd	28cm+G2
G3474.0461	Boo	max	24	55584.692	0.003	+0.0592	124	ccd	28cm+G2
AO	Cam	s	24	55804.572	0.004	-0.0009	87	ccd	50mm+G1
G4360.1210	Cam	p	24	55601.397	0.002	+0.0001	130	ccd	28cm+G2
Y	Cnc	max	24	55631.32	0.02	-0.0945	140	ccd	28cm+G2
RY	Cnc	p	24	55602.35	0.003	+0.0028	200	ccd	28cm+G2
WW	Cnc	p	24	55601.674	0.001	-0.005	106	ccd	28cm+G2
X	CMi	max	24	55562.546	0.004	-0.0028	216	ccd	28cm+G2
Y	CMi	max	24	55660.355	0.007	-0.0663	203	ccd	28cm+G2
RV	CMi	max	24	55611.537	0.005	+0.0041	137	ccd	28cm+G2
TX	CMi	s	24	55601.567	0.001	+0.0052	61	ccd	28cm+G2
TZ	CMi	p	24	55654.358	0.005	+0.0042	260	ccd	28cm+G2

UY	CMi	p	24	55578.58	0.01	-0.0531	201	ccd	28cm+G2
AD	CMi	max	24	55584.533	0.002	+0.0006	114	V	28cm+G2
del	Cap	p	24	55804.424	0.015	-0.0116	767	ccd	Car+G1
ST	Cet	max	24	55838.465	0.003	+0.0014	127	ccd	28cm+G2
SU	Cet	max	24	55840.39	0.006	+0.0021	87	ccd	28cm+G2
GP	Cet	p	24	55855.39	0.02	+0.0458	100	ccd	50mm+G1
G4686.2061	Cet	p	24	55837.512	0.02	-0.0246	296	V	28cm+G2
G2040.1409	CrB	max	24	55644.507	0.01	-0.1037	200	ccd	28cm+G2
RT	Equ	max	24	55784.631	0.006	-0.0316	90	ccd	28cm+G2
RT	Equ	max	24	55835.351	0.004	-0.0225	99	ccd	28cm+G2
RT	Equ	max	24	55839.355	0.003	-0.022	89	ccd	28cm+G2
RZ	Equ	p	24	55784.418	0.003	-0.0022	78	ccd	280mm+G2
SV	Eri	max	24	55850.499	0.01	+0.0048	0	ccd	50mm+G1
UZ	Eri	max	24	55856.508	0.012	-0.0007	222	ccd	28cm+G2
BU	Eri	p	24	55885.518	0.005	+0.0004	113	ccd	50mm+G1
BV	Eri	s	24	55855.598	0.01	-0.0026	140	ccd	55mm+G1
BW	Eri	s	24	55881.595	0.02	+0.0021	196	ccd	50mm+G1
BW	Eri	p	24	55884.463	0.008	-0.0031	72	ccd	50mm+G1
BZ	Eri	p	24	55856.561	0.007	+0.0044	106	ccd	50mm+G1
CW	Eri	p	24	55883.556	0.007	-0.008	99	ccd	50mm+G1
SS	For	max	24	55888.54	0.003	-0.001	52	ccd	50mm+G1
XZ	For	p	24	55886.494	0.005	+0.0046	38	ccd	50mm+G1
NSV 01011	For	p	24	55887.464	0.004	-0.002	100	ccd	50mm+G1
G6431.0180	For	p	24	55890.43	0.005	-0.0204	80	ccd	50mm+G1
G7552.0260	For	p	24	55882.529	0.02	+0.0666	161	ccd	50mm+G1
V 878	Her	p	24	55695.567	0.012	-0.0059	254	ccd	Car+G1
G0267.0253	Leo	p	24	55602.494	0.005	+0.0042	213	ccd	28cm+G2
G1437.0805	Leo	p	24	55650.426	0.007	-0.0029	135	ccd	50mm+ST7
G1965.0735	Leo	p	24	55629.653	0.012	-0.003	374	ccd	28cm+G2
G4922.0195	Leo	p	24	55602.658	0.015	+0.0002	381	ccd	28cm+G2
WZ	Oph	s	24	55660.578	0.002	+0.002	202	V	28cm+G2
V 709	Oph	p	24	55711.397	0.006	-0.0009	90	ccd	28cm+G2
V1016	Oph	s	24	55631.587	0.003	+0.0054	120	ccd	28cm+G2
CM	Ori	max	24	55833.577	0.005	+0.0001	154	ccd	38cm+G2
FR	Ori	p	24	55578.467	0.002	+0.0036	107	ccd	28cm+G2
V 392	Ori	s	24	55838.628	0.01	-0.0006	289	V	28cm+G2
WZ	Peg	p	24	55836.449	0.003	-0.0332	130	ccd	28cm+G2
DI	Peg	p	24	55820.346	0.003	-0.0003	44	ccd	50mm+G1
EE	Peg	p	24	55803.418	0.008	+0.0038	365	ccd	50mm+G1
EE	Peg	p	24	55832.33	0.008	+0.0054	365	ccd	50mm+G1
EH	Peg	p	24	55830.402	0.015	+0.0584	1238	V	28cm+G1
V 421	Peg	s	24	55832.542	0.005	+0.008	215	ccd	50mm+G1
IQ	Per	p	24	55820.573	0.008	-0.0022	301	ccd	50mm+G1
EX	Psc	p	24	55832.412	0.003	-0.0014	156	ccd	28c+G2
FR	Psc	R	24	55584.384	0.007	+0.0887	117	ccd	28cm+G2
U	Sge	p	24	55740.457	0.004	+0.0078	610	ccd	50mm+G1
CX	Ser	s	24	55593.707	0.005	+0.0021	108	ccd	28cm+G2
RafV064	Ser	p	24	55593.668	0.002	-0.006	66	ccd	28cm+G2
TX	UMa	p	24	55661.472	0.005	-0.0054	249	ccd	50mm+G1
GZ	UMa	p	24	53905.409	0.01	+0.01	0	VI	Tarot
GZ	UMa	s	24	54052.585	0.01	-0.0085	0	VI	Tarot
W	UMi	s	24	55784.448	0.02	+0.0009	400	ccd	Car+G1
TY	UMi	p	24	55694.729	0.01	+0.3118	109	ccd	Car+G1
TY	UMi	p	24	55696.475	0.015	+0.333	375	ccd	Car+G1

TY	UMi	p	24	55784.439	0.009	+0.3322	142	ccd	Car+G1
G0285.1075	Vir	p	24	55654.55	0.003	+0.0063	183	ccd	28cm+G2
BW	Vul	min	24	55758.458	0.01	+0.0003	0	ccd	Car+G2
DR	Vul	s	24	55819.468	0.005	+0.0231	155	ccd	50mm+ST7

Remarks:

G2040.1409 CrB discovered by F.Brabaglia and E.Gastaldi, may be an RRc or an EW star

BW Vul minimum was observed, as recommended by Ch. Sterken

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- This research has made use of the SIMBAD database operated at CDS, Strasbourg, France.