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LIST OF VISUAL MAXIMA OF RR LYRAE STARS

ABSTRACT

166 instants of maximum light have been determined for 78 RR Lyrae variable stars (62 RRab and 16 RRc) from visual estimates. They are listed with the O-C relative to the most probable cycle number.

RESUME

166 instants de maxima de 78 étoiles variables du type RR Lyrae (62 RRab et 16 RRc) ont été déterminés à partir d'estimations visuelles. Ils sont listés avec l'O-C relatif au numéro de cycle le plus vraisemblable.

RIASSUNTO

166 massimi di 78 stelle variabili del tipo RR Lyrae (62 RRab e 16 RRc) sono stati determinati sulla base di stime visuali. Questi istanti di massimo sono raccolti in una lista con l'O-C relativo al numero di ciclo più probabile.

RESUMEN

166 instantes de máximos de 78 stelllas variables del tipo RR Lyrae (62 RRab y 16 RRc) han sido determinados a partir de estimaciones visuales. Aparecen listados con los O-C relativos al número de ciclo más probable.

OBSERVATIONS

Most of the observations cover a time interval going from October 2012 (JD 2456200) to October 2014 (JD 2456940). The observers are : Michel Dumont (DMT), Eloïse Ferrand (EFE), Stéphane Ferrand (FND) and Jacqueline Vandebroere (VBR).

<u>OBS.</u>	<u>METHOD</u>	<u>N. MAX</u>	<u>SITE</u>	<u>INSTRUMENTS</u>
DMT	vis	12	Bailleau l'Evêque, France	R80 mm and binoculars
EFE	vis	1	Saint-Piat, France	N76 mm
FND	vis	60	Saint-Piat, France	T305 – 406 mm
VBR	vis	93	Heure, Belgium	N350 mm

The times were determined by the observers from their visual estimates (vis). The ephemerides used are those of GEOS RR 53 (Vandebroere and Le Borgne, 2014) when the star is listed in it. If other ephemerides are used, it is indicated in notes where we find also the non linear O-C's.

LIST

<u>RRab</u>	<u>OBS.</u>	<u>MODE</u>	<u>HJD</u>	<u>ACC.</u>	<u>E (RR53)</u>	<u>O-C (RR53)</u>	<u>NOTES</u>
ZZ And	VBR	vis	56536.584	0.01	29208	+0.007	
ZZ And	VBR	vis	56541.578	0.01	29217	+0.010	
GM And	VBR	vis	56524.480	0.01	22283	+0.002	
GM And	VBR	vis	56541.436	0.01	22307	-0.004	
GV And	VBR	vis	56568.331	0.01	27352	-0.189	
GV And	VBR	vis	56917.421	0.015	28013	-0.166	
GV And	VBR	vis	56926.365	0.01	28030	-0.199	
V708 And	VBR	vis	56520.525	0.01	1953	+0.009	eph. GCVS
V708 And	VBR	vis	56536.527	0.01	1983	-0.007	idem
GW Aqr	VBR	vis	56538.432	0.01	16295	+0.014	
GY Aqr	VBR	vis	56539.549	0.01	19419	-0.080	
TU Ari	FND	vis	56655.300	0.015	38776	-0.022	
TV Ari	FND	vis	56661.315	0.02	5726	+0.024	eph. GCVS
TV Ari	FND	vis	56690.314	0.01	5776	+0.027	idem
BL Ari	FND	vis	56655.355	0.02	10301	+0.053	idem
V575 Aur	VBR	vis	56273.465	0.01	6593	+0.015	idem
V575 Aur	VBR	vis	56633.473	0.01	7316	+0.018	idem
V653 Aur	FND	vis	56733.481	0.01	8978	+0.075	idem

RRab	OBS.	MODE	HJD	ACC.	E (RR53)	O-C (RR53)	NOTES
V653 Aur	FND	vis	56736.358	0.015	8983	+0.056	eph. GCVS
RS Boo	DMT	vis	56813.483	0.007	55814	+0.009	-0.011 (with quadratic elements)
RS Boo	DMT	vis	56824.441	0.01	55843	+0.025	+0.004 idem
RS Boo	DMT	vis	56827.453	0.01	55851	+0.018	-0.003 idem
UY Boo	VBR	vis	56366.501	0.01	35021	+0.366	
UY Boo	VBR	vis	56746.589	0.01	35605	+0.359	
FT Boo	VBR	vis	56072.481	0.01	10272	-0.010	
FT Boo	VBR	vis	56418.391	0.01	11026	-0.027	eph. Wils et al., 2006
FT Boo	VBR	vis	56840.477	0.01	11946	-0.028	idem
KR Boo	FND	vis	56757.568	0.01	7660	+0.049	eph. GCVS
KR Boo	FND	vis	56773.431	0.01	7691	+0.036	idem
KR Boo	FND	vis	56774.444	0.01	7693	+0.024	idem
KR Boo	FND	vis	56776.509	0.015	7697	+0.041	idem
V413 Cam	VBR	vis	56248.402	0.015	11064	-0.038	idem
V413 Cam	VBR	vis	56356.465	0.01	11317	-0.056	idem
V413 Cam	VBR	vis	56540.573	0.01	11748	-0.072	idem
V413 Cam	VBR	vis	56741.352	0.01	12218	-0.076	idem
SX Cnc	FND	vis	56722.358	0.006	8988	-0.022	
SX Cnc	FND	vis	56723.384	0.006	8990	-0.016	
SX Cnc	FND	vis	56724.405	0.006	8992	-0.015	
SX Cnc	FND	vis	56725.422	0.006	8994	-0.018	
SX Cnc	FND	vis	56726.441	0.008	8996	-0.020	
SX Cnc	FND	vis	56727.456	0.006	8998	-0.025	
AN Cnc	FND	vis	56628.569	0.013	35188	+0.003	-0.013 (with quadratic elements)
CQ Cnc	FND	vis	56662.503	0.005	22557	-0.018	
CQ Cnc	VBR	vis	56712.338	0.01	22652	-0.025	
KV Cnc	FND	vis	56664.409	0.008	7775	-0.134	eph. GCVS
KV Cnc	FND	vis	56667.405	0.008	7781	-0.150	idem
KV Cnc	FND	vis	56684.479	0.006	7815	-0.144	idem
KV Cnc	FND	vis	56690.512	0.006	7827	-0.135	idem
KV Cnc	FND	vis	56694.519	0.005	7835	-0.144	idem
RR CVn	VBR	vis	56356.612	0.01	32584	+0.016	
RR CVn	VBR	vis	56723.602	0.01	33241	+0.001	
BK Cas	FND	vis	56932.456	0.008	47698	+0.116	eph. GCVS
V740 Cep	VBR	vis	56638.255	0.01	10817	+0.079	idem
GQ Cet	VBR	vis	56190.509	0.01	5728	+0.014	idem
GQ Cet	VBR	vis	56248.304	0.01	5830	+0.009	idem
HN Cet	FND	vis	56605.397	0.01	10100	-0.010	idem
Z Com	VBR	vis	56074.455	0.01	33241	-0.004	
Z Com	FND	vis	56721.719	0.006	34425	-0.011	
Z Com	VBR	vis	56726.643	0.01	34434	-0.007	
CR Com	VBR	vis	56019.395	0.01	14954	+0.043	
CR Com	VBR	vis	56344.531	0.01	15406	+0.009	
RW Equ	VBR	vis	56179.359	0.015	88784	+0.011	eph. GCVS, star poorly observed
RW Equ	VBR	vis	56518.553	0.015	89733	-0.092	idem
RW Equ	VBR	vis	56536.408	0.01	89783	-0.114	idem
BK Eri	VBR	vis	55601.284	0.015	30795	+0.013	Blazhko effect ?
BK Eri	VBR	vis	56213.517	0.01	31912	-0.035	idem
V418 Her	VBR	vis	56498.448	0.01	37638	-0.008	
V552 Her	FND	vis	56781.512	0.01	7584	-0.005	
V552 Her	FND	vis	56831.475	0.01	7716	-0.007	
V1124 Her	FND	vis	56829.439	0.01	8323	-0.131	
AQ Leo	VBR	vis	55661.361	0.01	27591	-0.074	
AQ Leo	VBR	vis	56397.428	0.01	28930	-0.123	
GP Leo	FND	vis	56694.604	0.015	4393	+0.065	Drake, 2013, eph. has to be improved
GP Leo	FND	vis	56724.530	0.015	4437	+0.096	idem
IM Leo	VBR	vis	56384.470	0.01	4924	+0.014	eph. GCVS
Y LMi	VBR	vis	55624.589	0.01	9360	-0.018	
AB LMi	FND	vis	56710.476	0.008	9750	+0.121	eph. GCVS
AB LMi	FND	vis	56715.480	0.006	9759	+0.110	idem
AB LMi	FND	vis	56724.409	0.013	9775	+0.125	idem
AB LMi	FND	vis	56725.538	0.008	9777	+0.139	idem
AB LMi	FND	vis	56740.566	0.006	9804	+0.123	idem

RRab	OBS.	MODE	HJD	ACC.	E (RR53)	O-C (RR53)	NOTES
EY Lyr	VBR	vis	56356.441	0.01	8323	+0.056	eph. GCVS
RR Lyr	DMT	vis	56582.420	0.008	36820	-0.084	
RR Lyr	DMT	vis	56607.354	0.006	36864	-0.091	
RR Lyr	FND	vis	56607.362	0.01	36864	-0.083	
RR Lyr	EFE	vis	56607.365	0.01	36864	-0.080	
RR Lyr	DMT	vis	56636.264	0.014	36915	-0.089	
RR Lyr	DMT	vis	56820.460	0.007	37240	-0.115	
RR Lyr	DMT	vis	56824.436	0.010	37247	-0.107	
RR Lyr	DMT	vis	56833.492	0.006	37263	-0.120	
RR Lyr	DMT	vis	56901.502	0.007	37383	-0.131	
EN Lyr	VBR	vis	56235.278	0.015	20562	+0.037	
EN Lyr	VBR	vis	56535.391	0.015	20989	-0.008	
EN Lyr	VBR	vis	56814.481	0.015	21386	+0.013	
KR Lyr	VBR	vis	56235.280	0.01	34512	-0.087	
KR Lyr	VBR	vis	56254.248	0.01	34560	-0.116	
KR Lyr	VBR	vis	56450.565	0.015	35056	-0.102	
V895 Mon	VBR	vis	56355.372	0.015	4777	+0.013	
V773 Oph	VBR	vis	56481.469	0.015	27245	+0.024	
V773 Oph	VBR	vis	56505.451	0.015	27286	-0.007	
V785 Oph	VBR	vis	56540.417	0.01	33628	+0.048	
V816 Oph	VBR	vis	56538.403	0.01	35255	-0.032	
AV Peg	FND	vis	56607.261	0.01	51714	+0.071	+0.012 (with quadratic elements)
BT Peg	VBR	vis	56506.535	0.01	9431	-0.005	
BT Peg	VBR	vis	56520.470	0.015	9456	+0.011	
BT Peg	VBR	vis	56539.390	0.01	9490	+0.001	
GY Peg	VBR	vis	56520.587	0.01	15869	+0.001	
GY Peg	VBR	vis	56566.421	0.01	15960	+0.021	
IY Peg	FND	vis	56544.362	0.006	10713	-0.004	
FF Psc	VBR	vis	56248.236	0.01	6825	-0.056	eph. GCVS
FR Psc	VBR	vis	56518.571	0.01	6160	+0.010	idem
FR Psc	VBR	vis	56539.523	0.01	6206	+0.001	idem
GI Psc	VBR	vis	56568.542	0.01	5357	+0.088	idem
HT Psc	VBR	vis	56539.513	0.01	5102	-0.037	idem
HT Psc	VBR	vis	56568.554	0.01	5155	-0.030	idem
HX Psc	VBR	vis	56509.508	0.01	4855	+0.017	idem
HX Psc	VBR	vis	56510.573	0.01	4857	+0.009	idem
BH Ser	VBR	vis	56810.552	0.01	36235	+0.078	+0.015 (with quadratic elements)
BH Ser	VBR	vis	56840.527	0.01	36304	+0.068	+0.005 idem
UZ UMa	VBR	vis	56737.363	0.01	31518	+0.007	eph. GCVS
UZ UMa	VBR	vis	56757.433	0.01	31561	+0.001	idem
BF UMa	FND	vis	56740.364	0.01	16814	+0.009	
BF UMa	FND	vis	56745.375	0.01	16824	+0.010	
BF UMa	FND	vis	56766.428	0.015	16866	+0.021	
V341 UMa	FND	vis	56711.400	0.006	10275	+0.144	eph. GCVS
V341 UMa	FND	vis	56722.419	0.006	10296	+0.154	idem
AF UMi	VBR	vis	56493.551	0.01	7544	+0.102	idem
AF UMi	VBR	vis	56538.510	0.01	7609	+0.138	idem
AF UMi	FND	vis	56646.336	0.012	7765	+0.149	idem
AF UMi	VBR	vis	56726.517	0.01	7881	+0.160	idem
AF UMi	FND	vis	56726.526	0.012	7881	+0.169	idem
AF UMi	FND	vis	56757.591	0.012	7926	+0.134	idem
AF UMi	FND	vis	56903.454	0.015	8137	+0.171	idem
AF UMi	FND	vis	56932.473	0.008	8179	+0.163	idem
AF UMi	FND	vis	56943.529	0.008	8195	+0.161	idem
UZ Vir	VBR	vis	55627.610	0.015	38055	+0.032	Blazhko effect
UZ Vir	VBR	vis	56074.468	0.015	39029	-0.023	idem
CE Vul	VBR	vis	56535.392	0.01	44467	-0.021	+0.003 (with quadratic elements)
CE Vul	VBR	vis	56568.368	0.01	44556	-0.019	+0.006 idem
FK Vul	VBR	vis	56536.438	0.01	32744	+0.032	-0.003 idem
FK Vul	VBR	vis	56566.413	0.01	32813	+0.057	+0.022 idem
FK Vul	VBR	vis	56855.483	0.01	33479	+0.048	+0.009 idem

<u>RRc</u>	<u>OBS.</u>	<u>MODE</u>	<u>HJD</u>	<u>ACC.</u>	<u>E (RR53)</u>	<u>O-C (RR53)</u>	<u>NOTES</u>
J02111+2603.6 Ari	FND	vis	56597.532	0.025	11832	-0.027	normal, eph. Pojmanski, 2002, TYC 1761-2219-1
ST CVn	VBR	vis	56019.466	0.01	47190	-0.045	
ST CVn	VBR	vis	56072.431	0.01	47351	-0.058	
XZ CVn	VBR	vis	56341.541	0.01	33717	+0.026	
HY Com	VBR	vis	55609.535	0.015	41383	+0.068	
VZ Dra	VBR	vis	56506.359	0.015	29532	-0.103	
BX Leo	FND	vis	56725.370	0.018	26137	-0.055	normal
V558 Oph	FND	vis	56831.482	0.003	42487	-0.019	normal
GM Ori	FND	vis	56655.424	0.02	72832	+0.215	normal, eph. GCVS
DH Peg	FND	vis	56539.528	0.02	45697	-0.003	
DH Peg	FND	vis	56578.403	0.02	45849	+0.034	
DH Peg	DMT	vis	56594.445	0.006	45912	-0.021	
DH Peg	DMT	vis	56595.473	0.007	45916	-0.015	
GQ Psc	FND	vis	56601.287	0.015	12039	+0.012	normal, eph. GCVS
AP Ser	VBR	vis	55711.401	0.01	43479	-0.080	
AP Ser	VBR	vis	56019.480	0.01	44383	-0.079	
YZ Tau	FND	vis	56550.630	0.02	10431	-0.018	normal
YZ Tau	FND	vis	56684.339	0.025	10756	-0.038	normal
SX UMa	VBR	vis	56723.590	0.015	69616	+0.033	
SX UMa	VBR	vis	56725.430	0.015	69622	+0.030	
BK UMa	VBR	vis	56794.431	0.01	26488	+0.001	
MU UMa	VBR	vis	56725.624	0.01	12105	+0.006	
MU UMa	VBR	vis	56726.439	0.015	12108	+0.017	
QW UMa	FND	vis	56642.447	0.015	16780	+0.129	normal, eph. GCVS

Errata : The correct data for DU And in GEOS RR50 is 56158.609 (not 56178.491) and for IX Peg in GEOS RR52 it is HJD 56540.380 (not 56540.459) with O-C -0.092 (not -0.013).

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