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LIST OF VISUAL MAXIMA OF RR LYRAE STARS

ABSTRACT

129 instants of maximum light have been determined for 77 RR Lyrae variable stars (70 RRAB and 7 RRC) from visual estimates. They are listed with the O-C relative to the most probable cycle number.

RESUME

129 instants de maxima de 77 étoiles variables du type RR Lyrae (70 RRAB et 7 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

129 massimi di 77 stelle variabili del tipo RR Lyrae (70 RRAB e 7 RRC) sono stati determinati sulla base di stime visuali. Questi instanti di massimo sono raccolti in una lista con l'O-C relativo al numero di ciclo più probabile.

RESUMEN

129 instantes de máximos de 77 estrellas variables del tipo RR Lyrae (70 RRAB y 7 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 2018 (JD 2458400) to April 2020 (JD 2458970). The observers are: Roland Boninsegna (BNN), Michel Dumont (DMT), Stéphane Ferrand (FND) and Jacqueline Vandebroere (VBR).

<u>OBS.</u>	<u>METHOD</u>	<u>Nb MAX</u>	<u>SITE</u>	<u>INSTRUMENTS</u>
BNN	vis	1	Dourbes, Belgium	N400 mm
DMT	vis	8	Levesville and Crozet, France	R80 mm and binoculars
FND	vis	19	Saint-Piat, France	binoculars
VBR	vis	101	Heure, Belgium	N350 mm

The times were determined by the observers from their visual estimates (vis). The ephemeris used are those published after the list of the maxima, obtained with all the maxima of the GEOS RR Lyrae data base. If another ephemeris is used, it is indicated in notes.

LIST

<u>RRab</u>	<u>OBS.</u>	<u>MODE</u>	<u>HJD</u>	<u>ACC.</u>	<u>E</u>	<u>O-C</u>	<u>NOTES</u>
DY And	VBR	vis	55185.343	0.015	4682	-0.014	
DY And	VBR	vis	58850.266	0.010	10759	-0.009	
OZ Aql	VBR	vis	58314.540	0.020	36211	+0.027	
OZ Aql	VBR	vis	58690.504	0.010	36993	+0.008	
V518 Aql	VBR	vis	58347.466	0.020	41721	-0.016	
V518 Aql	VBR	vis	58694.540	0.015	42575	-0.016	
V525 Aql	VBR	vis	58747.438	0.010	34101	-0.003	
V653 Aur	VBR	vis	58950.389	0.010	12805	-0.010	
RS Boo	DMT	vis	58968.441	0.008	61525	-0.014	
RU Boo	VBR	vis	58584.464	0.010	10410	+0.005	
FU Boo	VBR	vis	58962.515	0.010	11521	-0.005	Eph. GCVS
LS Boo	VBR	vis	58663.456	0.015	7302	-0.001	
NN Boo	VBR	vis	58618.499	0.015	20697	-0.045	Eph. GCVS
NN Boo	VBR	vis	58934.424	0.010	21592	-0.046	Idem
TY Cam	VBR	vis	58944.365	0.010	25725	-0.025	
V354 Cam	VBR	vis	57728.323	0.015	4699	+0.003	Eph. GCVS
SW CVn	VBR	vis	58575.442	0.010	47906	+0.066	
UV CVn	VBR	vis	58984.482	0.010	35331	-0.046	

<u>RRab</u>	<u>OBS.</u>	<u>MODE</u>	<u>HJD</u>	<u>ACC.</u>	<u>E</u>	<u>O-C (RR53)</u>	<u>NOTES</u>
X CMi	VBR	vis	58538.404	0.010	28793	+0.024	
X CMi	VBR	vis	58542.396	0.010	28800	+0.016	
AQ Cep	VBR	vis	58529.557	0.010	19636	+0.050	Eph. GEOS RR53
Z Com	VBR	vis	58604.487	0.010	37869	+0.001	
TU Com	VBR	vis	58963.474	0.010	11835	+0.114	
TY Com	VBR	vis	56726.557	0.015	31716	+0.003	
UZ Com	VBR	vis	58246.488	0.015	22808	+0.012	
DL Com	VBR	vis	58961.538	0.010	41128	+0.003	
DL Com	VBR	vis	58984.437	0.010	41181	+0.001	
GU Com	VBR	vis	58247.426	0.015	24598	+0.007	
BN CrB	VBR	vis	58995.517	0.010	14955	+0.007	
V357 Cyg	VBR	vis	58674.447	0.015	44756	+0.000	
V802 Cyg	VBR	vis	58822.251	0.015	30233	+0.000	
V838 Cyg	BNN	vis	58694.431	0.012	27003	+0.005	
FF Del	VBR	vis	58334.435	0.020	27771	-0.020	
FF Del	VBR	vis	58395.417	0.020	27870	+0.034	
VZ Dra	VBR	vis	58356.405	0.015	35295	-0.093	
IS Dra	VBR	vis	58618.469	0.015	15434	-0.016	
IS Dra	VBR	vis	58940.378	0.010	16073	-0.009	
IS Dra	VBR	vis	58941.377	0.010	16075	-0.018	
OS Dra	VBR	vis	58530.340	0.015	19976	-0.013	Eph. GCVS
OS Dra	VBR	vis	58846.589	0.015	20882	-0.003	Idem
V363 Dra	VBR	vis	58387.333	0.015	13045	-0.133	Idem ; RR(B) ; VSX RRD
V363 Dra	VBR	vis	58667.461	0.020	13563	-0.139	Idem ; RR(B) ; VSX RRD
V461 Her	VBR	vis	58668.467	0.010	23487	-0.003	
V552 Her	VBR	vis	58674.498	0.010	12585	+0.005	
V734 Her	VBR	vis	58686.411	0.010	16864	-0.003	
V1083 Her	VBR	vis	58341.398	0.015	22492	+0.012	
V1087 Her	VBR	vis	58690.432	0.010	25366	+0.007	
RV Leo	VBR	vis	58966.457	0.015	38462	-0.006	
DI Leo	VBR	vis	58962.370	0.015	11786	+0.016	
DI Leo	VBR	vis	58966.376	0.015	11793	-0.015	
GP Leo	VBR	vis	58961.456	0.015	10311	-0.019	
LL Leo	VBR	vis	58932.594	0.015	22138	-0.036	
EN Lyn	VBR	vis	58540.463	0.015	11160	-0.013	
EP Lyn	VBR	vis	58572.454	0.015	3194	+0.015	
RR Lyr	DMT	vis	58390.433	0.011	40010	-0.198	
RR Lyr	DMT	vis	58632.440	0.007	40437	-0.229	
RR Lyr	DMT	vis	58717.450	0.007	40587	-0.244	
RR Lyr	DMT	vis	58721.429	0.007	40594	-0.233	
RR Lyr	DMT	vis	58725.429	0.010	40601	-0.200	
RR Lyr	FND	vis	58747.472	0.008	40640	-0.264	
RR Lyr	FND	vis	58751.453	0.006	40647	-0.251	
RR Lyr	FND	vis	58759.385	0.006	40661	-0.254	
RR Lyr	FND	vis	58768.456	0.012	40677	-0.253	Flat maximum
WW Lyr	VBR	vis	58689.496	0.015	27273	+0.016	
WW Lyr	VBR	vis	58690.535	0.010	27275	+0.024	
AW Lyr	VBR	vis	58369.417	0.010	35062	-0.077	
AW Lyr	VBR	vis	58372.397	0.015	35068	-0.082	
LX Lyr	VBR	vis	58656.547	0.010	29105	+0.010	
NR Lyr	VBR	vis	58656.541	0.015	23445	-0.015	
V531 Oph	VBR	vis	58668.523	0.015	39016	-0.019	
V773 Oph	VBR	vis	58689.487	0.010	31015	+0.010	
V773 Oph	VBR	vis	58716.433	0.015	31061	+0.015	
V816 Oph	VBR	vis	58722.413	0.015	40992	-0.033	
V865 Oph	VBR	vis	58042.253	0.015	10384	+0.043	
V2645 Oph	VBR	vis	58742.339	0.015	26083	-0.017	

<u>RRab</u>	<u>OBS.</u>	<u>MODE</u>	<u>HJD</u>	<u>ACC.</u>	<u>E</u>	<u>O-C (RR53)</u>	<u>NOTES</u>
V2645 Oph	VBR	vis	58748.329	0.010	26093	-0.009	
V2734 Oph	VBR	vis	58250.380	0.020	7090	-0.019	Eph. GCVS
V2734 Oph	VBR	vis	58694.414	0.015	7954	-0.006	Idem
BT Peg	VBR	vis	58717.506	0.010	13402	+0.007	
BT Peg	VBR	vis	58721.393	0.010	13409	-0.003	
CS Peg	VBR	vis	58746.419	0.010	9065	+0.012	
GV Peg	VBR	vis	58719.535	0.015	14905	-0.008	
V509 Peg	VBR	vis	58726.566	0.010	14953	+0.002	
V525 Peg	VBR	vis	58399.463	0.010	4210	+0.010	
V579 Peg	VBR	vis	58747.520	0.010	6507	-0.021	Eph. GCVS
V579 Peg	VBR	vis	58848.286	0.015	6653	-0.036	Idem
BH Ser	VBR	vis	58604.423	0.015	40363	+0.063	
V484 Ser	VBR	vis	58301.479	0.010	10905	+0.027	Eph. GCVS
V484 Ser	VBR	vis	58660.468	0.010	11607	+0.023	Idem
UX Tri	VBR	vis	58865.280	0.010	27475	-0.008	
QU UMa	VBR	vis	58931.386	0.015	11712	-0.007	Eph. GCVS
QU UMa	VBR	vis	58953.461	0.010	11747	-0.018	Idem
V345 UMa	VBR	vis	58572.603	0.010	12251	+0.005	
V353 UMa	VBR	vis	58930.558	0.015	10305	+0.015	
V353 UMa	VBR	vis	58945.370	0.010	10325	-0.012	
RX UMi	VBR	vis	58944.515	0.010	35248	-0.026	
RX UMi	VBR	vis	58945.494	0.010	35250	-0.027	
AE Vir	VBR	vis	58656.447	0.010	26426	+0.003	
V363 Vir	VBR	vis	58953.567	0.010	9780	-0.022	Eph. GCVS
V363 Vir	VBR	vis	58963.519	0.010	9802	-0.023	Idem
V388 Vir	VBR	vis	58934.620	0.015	5323	+0.027	
V520 Vir	VBR	vis	58245.506	0.015	6561	-0.038	Eph. GCVS
V520 Vir	VBR	vis	58966.562	0.010	7839	-0.032	Idem
RRC							
LQ Cnc	VBR	vis	58592.430	0.020	16202	+0.011	
LQ Cnc	VBR	vis	58870.480	0.020	17026	+0.024	
LQ Cnc	VBR	vis	58949.424	0.020	17260	+0.011	
XZ CVn	VBR	vis	58941.505	0.020	41641	-0.106	
RZ Cep	FND	vis	58386.597	0.012	79254	+0.135	
RZ Cep	DMT	vis	58397.421	0.009	79289	+0.155	
RZ Cep	FND	vis	58667.483	0.008	80164	+0.135	
RZ Cep	FND	vis	58680.422	0.008	80206	+0.110	
RZ Cep	FND	vis	58684.470	0.009	80219	+0.145	
RZ Cep	FND	vis	58688.453	0.009	80232	+0.115	
RZ Cep	FND	vis	58693.411	0.006	80248	+0.135	
RZ Cep	FND	vis	58718.416	0.020	80329	+0.138	
RZ Cep	FND	vis	58725.527	0.012	80352	+0.149	
RZ Cep	FND	vis	58739.402	0.006	80397	+0.134	
RZ Cep	FND	vis	58744.323	0.005	80413	-0.117	Maximum I
RZ Cep	FND	vis	58744.340	0.005	80413	+0.134	Maximum II
RZ Cep	FND	vis	58944.638	0.009	81062	+0.108	
DD Dra	FND	vis	58320.554	0.010	19712	+0.141	Mean maximum
DD Dra	FND	vis	58611.653	0.010	20603	+0.066	Idem
DD Dra	FND	vis	58962.524	0.010	21677	-0.040	Idem
DH Peg	DMT	vis	58400.435	0.007	52980	+0.017	
YZ Tau	VBR	vis	58405.525	0.020	14939	-0.034	
YZ Tau	VBR	vis	58407.491	0.020	14944	-0.057	
YZ Tau	VBR	vis	58426.402	0.020	14990	-0.074	
YZ Tau	VBR	vis	58440.391	0.020	15024	-0.075	
MU UMa	VBR	vis	58976.450	0.015	20505	-0.004	

EPHEMERIDES USED (VBR)

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RRAB

DY And : 52361.7353 + 0.60308023
 OZ Aql : 40904.4114 + 0.48079594
 V518 Aql : 41391.6967 + 0.40640890
 V525 Aql : 41161.9463 + 0.51568852
 V653 Aur : 51532.6336 + 0.57928667
 RS Boo : 35752.7167 + 0.37733829
 RU Boo : 53455.7561 + 0.49267077
 LS Boo : 54627.6007 + 0.55270549
 TY Cam : 41706.8316 + 0.67007030
 SW CVn : 37417.2029 + 0.44166019
 UV CVn : 36669.4556 + 0.63160037
 X CMi : 42086.1526 + 0.57139677
 Z Com : 37902.2122 + 0.54668130
 TU Com : 53497.2031 + 0.46186372
 TY Com : 37751.7366 + 0.59827270
 UZ Com : 41437.8415 + 0.73696328
 GU Com : 46175.2049 + 0.49078033
 UZ Com : 41437.8415 + 0.73696328
 BN CrB : 51338.9150 + 0.51197557
 V357 Cyg : 35396.3382 + 0.52011146
 V802 Cyg : 40815.2750 + 0.59560665
 V838 Cyg : 45725.4351 + 0.48027963
 FF Del : 41243.1023 + 0.61543887
 VZ Dra : 47025.9010 + 0.32102555
 IS Dra : 50843.4526 + 0.50376001
 V461 Her : 46619.4772 + 0.51300690
 V552 Her : 53910.8221 + 0.37851971
 V734 Her : 48888.5274 + 0.58099425
 V1083 Her : 44749.3750 + 0.60430426
 V1087 Her : 46958.4765 + 0.46250686

RV Leo : 39155.5029 + 0.51507879
 DI Leo : 52164.2131 + 0.57679794
 GP Leo : 51957.1717 + 0.67930398
 LL Leo : 51573.9280 + 0.33240141
 EN Lyn : 51563.8595 + 0.62514485
 EP Lyn : 57076.2916 + 0.46842451
 RR Lyr : 35711.6086 + 0.56683384
 WW Lyr : 44622.9472 + 0.51576771
 AW Lyr : 40928.3522 + 0.49743717
 LX Lyr : 42780.2009 + 0.54548485
 NR Lyr : 42666.4033 + 0.68202827
 V531 Oph : 37067.2755 + 0.55365149
 V773 Oph : 40524.4463 + 0.58568533
 V816 Oph : 43117.1081 + 0.38069229
 V865 Oph : 51414.5613 + 0.63825588
 V2645 Oph : 43139.2135 + 0.59821119
 BT Peg : 51255.6356 + 0.55677234
 CS Peg : 53628.8862 + 0.56453624
 GV Peg : 50269.2601 + 0.56694285
 V509 Peg : 53270.5726 + 0.36487602
 V525 Peg : 55693.9688 + 0.64263276
 BH Ser : 41064.4300 + 0.43455467
 UX Tri : 46036.63040 + 0.46692112
 V345 UMa : 51508.4539 + 0.57661776
 V353 UMa : 51284.6806 + 0.74195657
 RX UMi : 41657.7327 + 0.49043372
 AE Vir : 41906.0283 + 0.63386119
 V388 Vir : 56044.2429 + 0.54299264

RRC

LQ Cnc : 53125.4742 + 0.33742405
 XZ CVn : 45278.0505 + 0.32812758
 RZ Cep : 33923.4584 + 0.30866586
 DD Dra : 51878.6392 + 0.32679453

DH Peg : 44863.4500 + 0.25551083
 YZ Tau : 52258.5674 + 0.41146822
 MU UMa : 53482.0395 + 0.26795487

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