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LIST OF CCD AND VISUAL MAXIMA OF RR LYRAE STARS

ABSTRACT

161 instants of maximum light have been determined for 49 RR Lyrae variable stars from CCD measurements or from visual estimates. They are listed with the O-C relative to the most probable cycle number.

RESUME

161 instants de maxima de 49 étoiles variables du type RR Lyrae ont été déterminés à partir de mesures CCD ou d'estimations visuelles. Ils sont listés avec l'O-C relatif au numéro de cycle le plus vraisemblable.

RIASSUNTO

161 massimi di 49 stelle variabili del tipo RR Lyrae sono stati determinati sulla base di misure CCD o di stime visuali. Questi instanti di massimo sono raccolti in una lista con l'O-C relativo al numero di ciclo piú probabile.

RESUMEN

161 instantes de máximos de 49 estrellas variables del tipo RR Lyrae han sido determinados a partir de medidas CCD o 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 April 2007 (JD 2454200) to September 2008 (JD 2454740). The observers are : Eric Broens (BRO), Michel Dumont (DMT), Johanna Jurcsik and Konkoly team (KON), Stelios Kleidis (KLE), Joël Nicolas (NCL), Marco Nobile (NOB) and Jacqueline Vandenbroere (VBR).

The maxima of BRO, KON and KLE were determined by VBR from the CCD V measurements published in Jurcsik et al. (2008) and from the CCD V measurements used in Wils et al. (2008) and received by private communication The other times were generally determined by the observers from their CCD measurements or from their visual estimates (vis). The O-C are appearing in notes when new or better ephemerides were used and after correction by a non linear relation.

The O-C's curves published in Le Borgne et al. (2007) were examined to avoid any unlikelihood and the O-C relative to linear and non linear ephemerides of this paper were systematically noted LB 2007.

LIST

STARS	OBS.	MODE	HJD	ACC	E(GC 85)	O-C (G 85)	NOTES
V1070 Aql	NCL	CCD	54689.460	0.002	72715	+0.009	
V1070 Aql	NCL	CCD	54700.447	0.002	72745	+0.004	
RS Boo	DMT	vis	54572.477	0.008	33927	+0.008	- 0.006 (with parabolic elements of LB 2007)
RS Boo	DMT	vis	54661.529	0.013	34163	+0.008	- 0.006 idem
UY Boo	VBR	vis	54509.565	0.02	19472	+0.783	
UY Boo	VBR	vis	54597.467	0.02	19607	+0.822	
CQ Boo	VBR	vis	54568.466	0.02	12842	- 0.031	eph. A. Paschke, 2000, private com.
CQ Boo	VBR	vis	54583.425	0.02	12895	- 0.011	idem
RZ Cam	KON	CCD V	54512.352	0.002	31415	+0.051	with meas. from IBVS 5846
RZ Cam	KON	CCD V	54513.311	0.0015	31417	+0.049	idem

STARS	OBS.	MODE	HJD	ACC	E (GC 85)	O-C (G 85)	NOTES
RZ Cam	KON	CCD V	54517.637	0.002	31426	+0.051	with meas. from IBVS 5846
RZ Cam	KON	CCD V	54520.519	0.002	31432	+0.050	idem
RZ Cam	KON	CCD V	54521.4785	0.001	31434	+0.049	idem
RZ Cam	KON	CCD V	54524.362	0.002	31440	+0.050	idem
RZ Cam	KON	CCD V	54585.379	0.001	31567	+0.049	idem
RW Cnc	VBR	vis	54203.392	0.02	26767	+0.203	- 0.038 (with parabolic elements of LB 2007)
RW Cnc	VBR	vis	54506.556	0.02	27321	+0.218	- 0.031 idem
AN Cnc	VBR	vis	54499.381	0.01	29584	+0.142	- 0.005 idem
AN Cnc	VBR	vis	54505.360	0.01	29595	+0.146	+0.009 idem
RR CVn	VBR	vis	54211.551	0.01	18870	+0.013	
RR CVn	VBR	vis	54568.494	0.01	19509	+0.006	
RZ CVn	VBR	vis	54213.471	0.02	24444	- 0.174	
RZ CVn	VBR	vis	54513.633	0.01	24973	- 0.173	
SS CVn	VBR	vis	54591.470	0.02	31281	+0.150	
ST CVn	NCL	CCD	54636.5175	0.006	43293	+0.705	
ST CVn	NCL	CCD	54637.503	0.005	43296	+0.704	
ST CVn	NCL	CCD	54639.477	0.004	43302	+0.703	
ST CVn	NCL	CCD	54641.436	0.003	43308	+0.688	
ST CVn	NCL	CCD	54643.425	0.004	43314	+0.703	
SW CVn	KON	CCD V	54544.2845	0.001	33937	- 0.164	- 0.005 (with parabolic elements of LB 2007 and meas. IBVS 5846)
SW CVn	KON	CCD V	54573.433	0.001	34003	- 0.165	- 0.008 idem
SW CVn	KON	CCD V	54576.526	0.0015	34010	- 0.163	- 0.006 idem
SW CVn	KON	CCD V	54599.493	0.002	34062	- 0.163	- 0.005 idem
AA CMi	VBR	vis	54501.483	0.01	37632	+0.057	
AA CMi	VBR	vis	54504.339	0.01	37638	+0.055	
RZ Cep	DMT	vis	54505.480	0.01	38456	- 0.696	
DX Cep	VBR	vis	54421.317	0.015	29969	+0.019	
DX Cep	VBR	vis	54627.513	0.01	30361	+0.007	
U Com	VBR	vis	54509.570	0.01	100937	+0.009	
U Com	VBR	vis	54592.399	0.01	101220	-0.007	
RV CrB	VBR	vis	53464.544	0.01	31779	+1.406	
RV CrB	VBR	vis	53531.524	0.015	31981	+1.410	
V894 Cyg	VBR	vis	54387.320	0.01	30434	+0.043	
V894 Cyg	VBR	vis	54672.448	0.01	30933	+0.041	
VZ Dra	VBR	vis	54306.455	0.02	34094	- 0.167	+0.028 (eph. GEOS RR9)
VZ Dra	VBR	vis	54593.431	0.02	34988	- 0.193	+0.007 idem
VZ Dra	VBR	vis	54599.531	0.02	35007	- 0.192	+0.008 idem
XZ Dra	VBR	vis	54364.356	0.02	26099	- 0.113	
XZ Dra	VBR	vis	54594.519	0.02	26582	- 0.098	
BD Dra	VBR	vis	54593.527	0.01	21764	-1.042	
BD Dra	VBR	vis	54599.415	0.01	21774	- 1.044	
BK Dra	VBR	vis	54592.567	0.01	49097	- 0.163	
BK Dra	VBR	vis	54595.534	0.01	49102	- 0.157	
BK Dra	VBR	vis	54729.344	0.008	49328	- 0.157	
SZ Gem	VBR	vis	54504.411	0.01	54497	- 0.052	- 0.009 (LB 2007)
SZ Gem	VBR	vis	54505.411	0.01	54499	- 0.054	- 0.011 idem
GI Gem	KON	CCD V	54434.527	0.002	55596	+0.071	- 0.003 (LB 2007 ; with meas. IBVS 5846)
GI Gem	KON	CCD V	54440.592	0.001	55610	+0.071	- 0.004 idem
GI Gem	KON	CCD V	54441.458	0.002	55612	+0.070	- 0.005 idem
GI Gem	KON	CCD V	54447.523	0.001	55626	+0.069	- 0.005 idem
GI Gem	KON	CCD V	54449.690	0.001	55631	+0.070	- 0.005 idem
GI Gem	KON	CCD V	54470.488	0.001	55679	+0.071	- 0.003 idem
GI Gem	KON	CCD V	54479.586	0.002	55700	+0.071	- 0.004 idem
GI Gem	KON	CCD V	54483.4845	0.001	55709	+0.070	- 0.005 idem
GI Gem	KON	CCD V	54489.550	0.001	55723	+0.070	- 0.005 idem
GI Gem	KON	CCD V	54490.419	0.002	55725	+0.072	- 0.003 idem

STARS	OBS.	MODE	HJD	ACC	E (GC 85)	O-C (G 85)	NOTES
GI Gem	KON	CCD V	54500.385	0.0015	55748	+0.073	- 0.002 (LB 2007 ; with meas. IBVS 5846)
GI Gem	KON	CCD V	54506.449	0.015	55762	+0.071	- 0.004 idem
GI Gem	KON	CCD V	54510.348	0.001	55771	+0.071	- 0.004 idem
GI Gem	KON	CCD V	54523.348	0.002	55801	+0.073	- 0.002 idem
VZ Her	NOB	CCD	54590.536	0.002	40428	+0.062	- 0.016 (with parabolic elements of LB 2007)
AG Her	VBR	vis	54593.461	0.01	41468	+0.005	
AG Her	VBR	vis	54643.468	0.01	41545	+0.004	
AR Her	VBR	vis	54573.457	0.01	27913	- 0.782	
AR Her	VBR	vis	54627.485	0.02	28028	- 0.807	
GY Her	VBR	vis	54583.431	0.01	34699	+0.110	
GY Her	VBR	vis	54594.437	0.015	34720	+0.104	
GY Her	VBR	vis	54648.451	0.01	34823	+0.107	
LS Her	KLE	CCD V	54199.589	0.003	113491	+0.044	
LS Her	KLE	CCD V	54201.432	0.002	113499	+0.041	
LS Her	KLE	CCD V	54203.498	0.003	113508	+0.029	
LS Her	BRO	CCD V	54213.436	0.003	113551	+0.043	
LS Her	KLE	CCD V	54214.588	0.002	113556	+0.041	
LS Her	BRO	CCD V	54218.468	0.003	113573	- 0.003	
LS Her	BRO	CCD V	54222.4135	0.003	113590	+0.019	
LS Her	KLE	CCD V	54223.580	0.003	113595	+0.031	
LS Her	KLE	CCD V	54229.567	0.005	113621	+0.017	
LS Her	KLE	CCD V	54232.5415	0.002	113634	- 0.009	
LS Her	KLE	CCD V	54235.569	0.003	113647	+0.018	
LS Her	KLE	CCD V	54236.503	0.002	113651	+0.029	
LS Her	BRO	CCD V	54244.563	0.003	113686	+0.011	
LS Her	KLE	CCD V	54247.558	0.005	113699	+0.005	
LS Her	KLE	CCD V	54252.446	0.003	113720	+0.046	
LS Her	BRO	CCD V	54257.482	0.003	113742	+0.004	
LS Her	KLE	CCD V	54263.509	0.006	113768	+0.030	
LS Her	KLE	CCD V	54264.446	0.003	113772	+0.044	
LS Her	KLE	CCD V	54267.437	0.002	113785	+0.035	
LS Her	KLE	CCD V	54269.502	0.004	113794	+0.022	
LS Her	KLE	CCD V	54273.404	0.003	113811	+0.001	
LS Her	KLE	CCD V	54283.338	0.003	113854	+0.010	
LS Her	KLE	CCD V	54289.372	0.003	113880	+0.043	
LS Her	KLE	CCD V	54291.445	0.003	113889	+0.039	
LS Her	KLE	CCD V	54292.365	0.002	113893	+0.035	
LS Her	KLE	CCD V	54298.321	0.003	113919	- 0.010	
LS Her	KLE	CCD V	54301.373	0.004	113932	+0.042	
LS Her	BRO	CCD V	54302.525	0.003	113937	+0.040	
LS Her	BRO	CCD V	54318.435	0.003	114006	+0.024	
CQ Lac	VBR	vis	54359.448	0.01	31164	+0.135	
CQ Lac	VBR	vis	54718.446	0.01	31743	+0.130	
CZ Lac	VBR	vis	54388.366	0.01	21310	- 0.251	
CZ Lac	VBR	vis	54709.406	0.015	22053	- 0.339	
CZ Lac	VBR	vis	54718.502	0.01	22074	- 0.319	
PW Lac	VBR	vis	54390.358	0.01	32929	+0.153	
PW Lac	VBR	vis	54662.407	0.015	33460	+0.135	
SU Leo	KON	CCD V	54453.602	0.0015	64123	- 0.083	with meas. from IBVS 5846
SU Leo	KON	CCD V	54486.662	0.002	64193	- 0.081	idem
SU Leo	KON	CCD V	54487.603	0.001	64195	- 0.085	idem
SU Leo	KON	CCD V	54494.688	0.002	64210	- 0.084	idem
SU Leo	KON	CCD V	54497.522	0.0015	64216	- 0.083	idem
SU Leo	KON	CCD V	54576.391	0.002	64383	- 0.083	idem
BT Leo	VBR	vis	54557.415	0.02	57907	+0.057	
BT Leo	VBR	vis	54564.417	0.01	57921	+0.062	

STARS	OBS.	MODE	HJD	ACC	E (GC 85)	O-C (G 85)	NOTES
TV Lib	VBR	vis	54594.442	0.015	128242	+0.016	
TV Lib	VBR	vis	54599.567	0.015	128261	+0.018	
RW Lyn	VBR	vis	54499.374	0.01	57200	- 0.161	
RW Lyn	VBR	vis	54504.361	0.01	57210	- 0.160	
TT Lyn	VBR	vis	54504.446	0.02	29883	- 0.041	- 0.007 (LB 2007)
TT Lyn	VBR	vis	54507.436	0.02	29888	- 0.038	- 0.004 idem
RR Lyr	DMT	vis	54426.254	0.007	20293	- 0.613	
RR Lyr	DMT	vis	54572.520	0.02	20551	- 0.599	
RR Lyr	DMT	vis	54580.442	0.01	20565	- 0.613	
RR Lyr	DMT	vis	54644.506	0.006	20678	- 0.605	
RR Lyr	DMT	vis	54648.481	0.007	20685	- 0.598	
RR Lyr	DMT	vis	54661.498	0.010	20708	- 0.619	
RR Lyr	DMT	vis	54728.407	0.017	20826	- 0.600	
RR Lyr	DMT	vis	54732.363	0.01	20833	- 0.612	
RR Lyr	DMT	vis	54737.453	0.01	20842	- 0.624	
FN Lyr	VBR	vis	52820.472	0.01	36009	+0.026	
FN Lyr	VBR	vis	52876.379	0.01	36115	+0.029	
FN Lyr	VBR	vis	52877.419	0.01	36117	+0.014	
FN Lyr	VBR	vis	52896.400	0.01	36153	+0.008	
FN Lyr	VBR	vis	53636.355	0.01	37556	+0.025	
V452 Oph	VBR	vis	54643.450	0.015	32281	+0.019	
V452 Oph	VBR	vis	54648.443	0.01	32290	- 0.003	
V455 Oph	VBR	vis	54627.506	0.01	28187	- 0.261	
V455 Oph	VBR	vis	54672.451	0.01	28286	- 0.253	
VV Peg	VBR	vis	52886.525	0.02	27636	- 0.015	
VV Peg	VBR	vis	52887.507	0.015	27638	- 0.010	
AR Ser	VBR	vis	54595.426	0.02	20303	- 0.068	
AR Ser	VBR	vis	54599.467	0.02	20310	- 0.053	
DF Ser	VBR	vis	54597.421	0.01	56856	+0.088	+0.004 (LB 2007)
DF Ser	VBR	vis	54671.421	0.01	57025	+0.100	+0.016 idem
EX UMa	VBR	vis	54506.476	0.02	10120	+0.031	eph. IBVS 4241
KT UMa	VBR	vis	54506.496	0.02	8673	+0.013	eph. IBVS 4815
KT UMa	VBR	vis	54592.427	0.02	8810	+0.004	idem
AE Vir	VBR	vis	54205.459	0.01	40897	+0.093	
AE Vir	VBR	vis	54591.485	0.01	41506	+0.100	
BC Vir	VBR	vis	54205.398	0.02	60730	+0.132	
BC Vir	VBR	vis	54595.499	0.02	61421	+0.154	
BN Vul	VBR	vis	54360.425	0.015	14862	+0.077	
BN Vul	VBR	vis	54729.356	0.015	15483	+0.054	

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