REVISED PREDICTION ELEMENTS FOR 23 SOUTHERN RR LYRAE STARS

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Abstract

Visual observations in the AAVSO International Database of 23 RR Lyrae stars of southern declination have been reduced; revised maxima prediction elements are given for 21 of these stars. Maxima prediction elements are established for RZ Cap and AN Cap.

Discussion

During the past four years some six thousand visual observations in the AAVSO International Database have been made for 23 RR Lyrae stars of southern declination. Reduction of these data has provided information sufficient to provide for the revision of previously established maxima prediction elements listed in the *General Catalogue of Variable Stars* (Kholopov *et al.* 1985) and *SAC* 70 (Kurpinska-Winiarska *et al.* 1998). Maxima prediction elements are established for two stars (RZ Cap and AN Cap) for which periods were previously unknown.

All new and revised elements resulting from this project are listed in Table 1 along with their O-C deviations from the established elements.

The initial epochs listed in the catalogues were assumed to be correct, so the accuracy of the proposed periods in Table 1 is significant to the last digit. For RZ Cap and AN Cap, which had no elements listed in the catalogues, the accuracy of their periods is also significant to the last digit.

References

Kholopov, P. N., *et al.* 1985, *General Catalogue of Variable Stars*, 4th ed., Moscow.
Kurpinska-Winiarska, M., *et al.* 1998, *Rocznik Astron. Obs. Krakowskiego, Suppl. Ann. Cracoviense*, No. 70, Krakow.

Table 1. Revised or new maxima prediction elements.

GCVS 85 Star	*SAC 70 O-C*	*Epoch O-C*	*JD 2400000+*	*Proposed Period (d)*
TZ Aqr	0.010	0.010	37548.900	0.5711947
YZ Aqr	0.036	-0.141	51106.667	0.5519294
AA Aqr	-0.073	-0.031	13146.000	0.6088887
BO Aqr	0.070	0.070	41621.252	0.694024
BR Aqr	-0.113	-0.015	37636.219	0.4818743
DN Aqr	0.003	0.003	28425.280	0.6337541
RV Cap	0.011	0.001	33883.262	0.4477443

Table continued on next page

Table 1 (continued). Revised or new maxima prediction elements.

GCVS 85 Star	*SAC 70 O-C*	*O-C*	*Epoch JD 2400000+*	*Proposed Period (d)*
RZ Cap	N/A	N/A	50686.705	0.40099
VW Cap	0.088	N/A	25409.60	0.314265
YZ Cap	0.009	-0.045	43729.741	0.2734567
AN Cap	N/A	N/A	50339.645	0.41579
RU Cet	0.054	0.143	39826.411	0.586283
RV Cet	0.145	-0.186	39113.363	0.6234108
RX Cet	-0.023	-0.043	40125.799	0.5736902
RZ Cet	-0.059	-0.059	33906.892	0.5106090
UU Cet	-0.114	-0.164	37911.546	0.606073
RX Eri	-0.012	0.000	Use *SAC* 70 elements	
SV Eri	1.803	-0.105	41338.254	0.7138714
BB Eri	0.157	0.004	39559.291	0.569906
RX For	-0.031	-0.031	39831.387	0.5973123
SS For	-0.116	-0.116	38668.951	0.4954274
U Lep	0.046	-0.005	37690.201	0.5814786
RU Scl	-0.190	-0.190	31122.839	0.4933341