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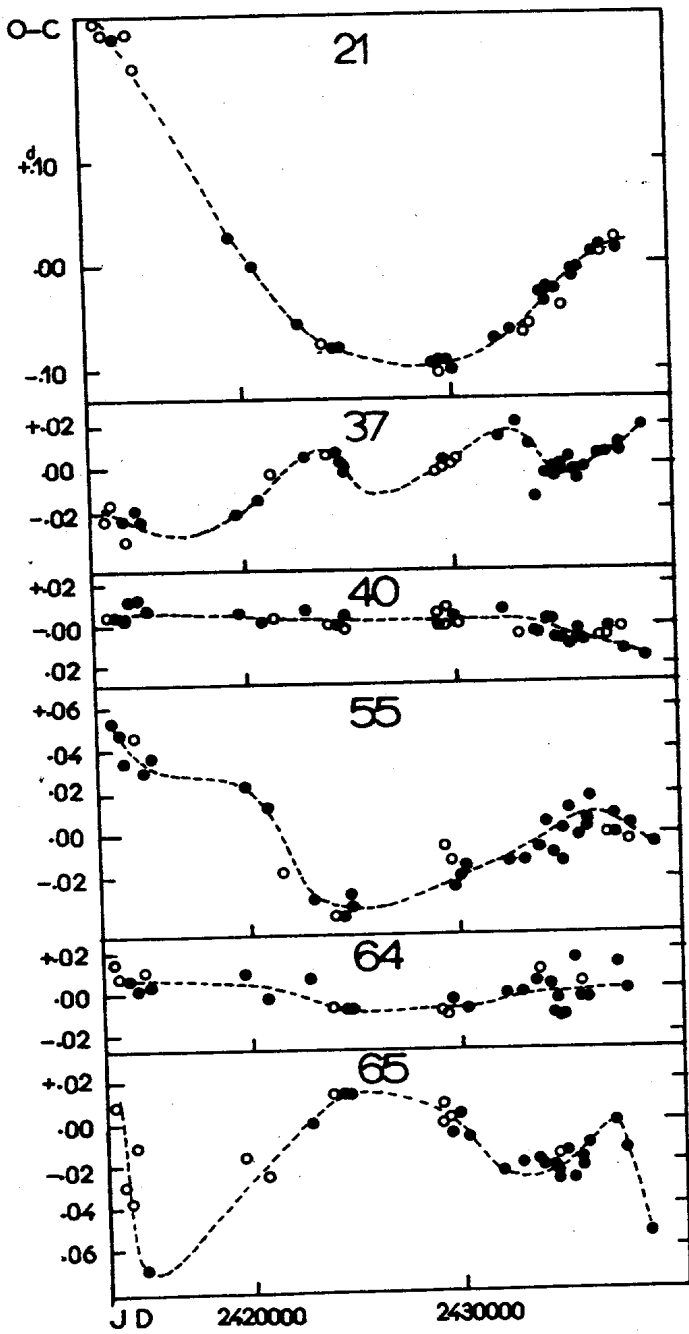
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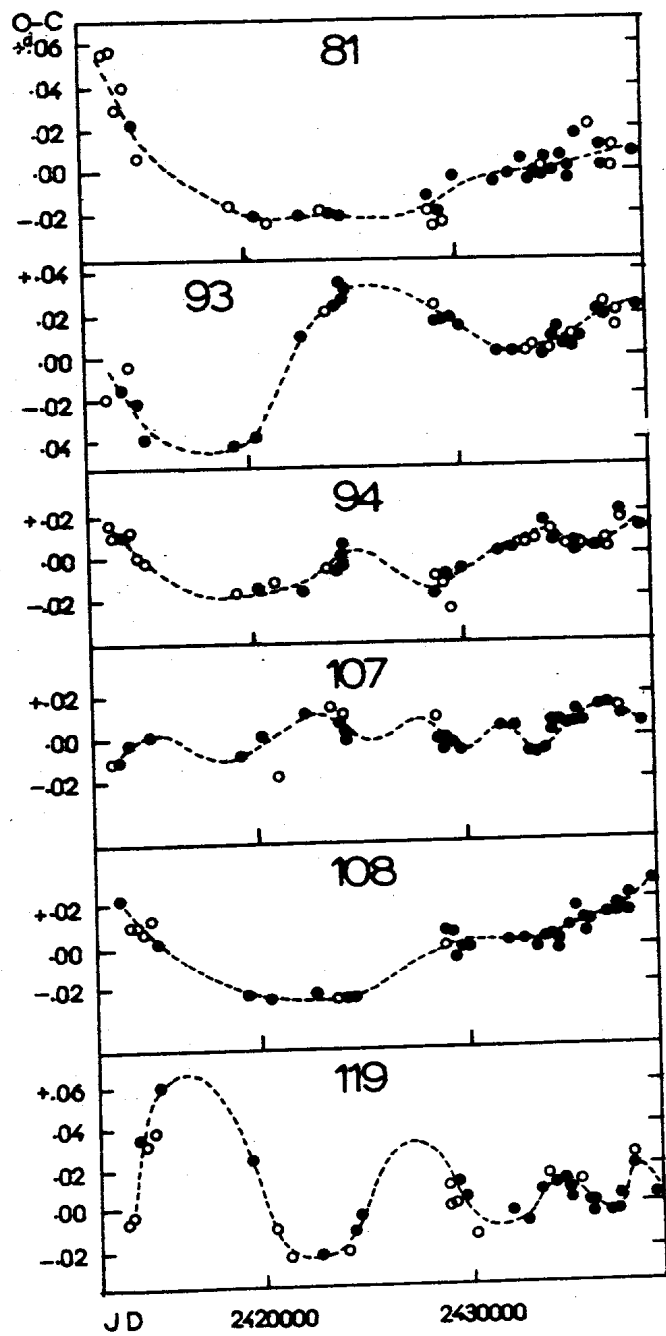
ON 12 RR LYRAE STARS IN M 3

120 plates from the Moscow collection have been measured and the magnitudes obtained for variables 21, 37, 40, 55, 64, 65, 81, 93, 94, 107, 108 and 119 [1] were combined with all observations published up to the present [2-13]. All magnitudes were reduced to Kukarkin's system [14]. From season moments of maxima calculated by the modified method of superposition of the mean light curve O - C diagrams were plotted (s. Figures. Open circles denote uncertain values). On the basis of mean-weighted light curves also period-amplitude and period-asymmetry relations were deduced. Our results differ slightly from those given in [13].

DATA ON 12 RR LYRAE STARS IN M 3

	$T_o^{JD_{hel}}$	P	Max	A		
21	2430000.415	0.5157336	14.81 ^m	1.46 ^m	0.150	0.56 ^m
37	.241	.3266384	15.34	0.78	.390	.05
40	.397	.5515416	15.01	1.31	.140	.48
55	.032	.5298136	14.88	1.43	.125	.53
64	.382	.6054590	15.32	0.94	.180	.30
65	.332	.6683394	14.79	1.43	.140	.43
81	.461	.5291108	14.86	1.44	.130	.55
93	.420	.6023007	15.24	1.03	.150	.32
94	.304	.5236936	14.90	1.43	.130	.51
107	.039	.3090348	15.40	0.74	.400	.03
108	.250	.5196047	14.94	1.36	.140	.53
119	.192	.5177411	14.76	1.49	.170	.53





Var 65 has an amplitude unusually large for RR_b stars*. On P - A and P - ξ diagrams it deviates from all the other stars. Generally our O - C diagrams (see figure) resemble those of 23. Nevertheless, the period-change could be expressed for none of the stars by a parabolic law. It appears to have cyclical character. This can be well seen for variables 37, 65, 93, 94, 107 and 119. The positive correlation [15] is likely to take place in this case.

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* The star belongs to the long period sequence. S. [13] p. 72. Editor.