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ON FIVE RR LYRAE-TYPE STARS

Based on numerous estimates obtained from the sky patrol plates of the Moscow and Odessa observatories, as well as from visual observations resulting elements of five variable stars have been derived (Table 1). One of these, DI Lyr, has not been studied earlier. Elements of three stars FK Vul, BH and DR Lyr, found earlier proved to be erroneous.

In investigating BH Lyr the old observations by N.F. Floria and E. Kheilo have also been used and reduced anew. Jumping variations in the periods of BH and DI Lyrae have been detected; therefore for them several systems of elements are found designated with (A), (B) and (C) in Table 1.

Moments of maxima are given in Tables 2-6 which have been obtained from seasonal mean light-curves. Mean light-curves are plotted in Fig.1.

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Table 1  
Elements of five RR Lyrae-type stars

Star	Interval JD	Max.hel.JD	Period	Note
BH Lyr	2413712-2427927	2413712.358	0.6129028	A
"	2434472-2436102	2434472.547	0.6128941	B
"	2436423-2441888	2437164.365	0.6128864	C
DI Lyr	2437160-2439293	2437160.310	0.4174486	A
"	2439293-2440768	2439293.468	0.4178451	B
"	2440768-2442000	2440768.442	0.4174492	C
DR Lyr	2437100-2442000	2437168.403	0.8313502	
FH Vul	2418565-2442665	2436027.454	0.4054185	*
FK Vul	2416729-2442638	2436076.423	0.4340529	**

Notes: \*-the value of period changes;\*\* -strong Blazhko phenomenon.

Table 2  
Mean moments of maxima of BH Lyrae

Observer	Max.hel.JD	E	O-A	O-B	O-C
Florja	2413712.342	-38264	-0.016	-	-
"	4224.117	-37429	- .015	-	-
"	4935.133	-36269	+ .034	-	-
Kheylo	27927.410	-15071	- .003	-0.041	-
"	34472.544	- 4392	- .056	- .003	-
"	5011.284	- 3513	- .059	+ .003	-
"	6102.235	- 1733	- .075	+ .003	-
"	6423.385	- 1209	-	- .003	0.000
"	6790.506	- 610	-	- .006	+ .002
Tsessevich	7164.371	0	-	- .007	+ .006
"	8142.521	+ 1596	-	- .036	- .011
"	9031.216	+ 3046	-	- .037	- .001
"	40381.410	+ 5249	-	- .049	+ .004
"	1486.437	+ 7052	-	- .070	- .003
"	1888.495	+ 7708	-	- .071	+ .002

Table 3  
Mean moments of maxima of DI Lyrae

Max.hel.JD	E	O-A	O-B	O-C
2437160.312	0	+0.002	-	-
7761.427	1440	- .009	-	-
8196.427	2482	+ .010	-	-
8560.433	3354	.000	-	-
8904.412	4178	+ .002	-	-
9293.469	5110	- .003	+0.001	-
9716.380	6123	+ .032	.000	-
40768.444	8643	+ .126	+ .001	+0.002
1486.449	10363	+ .119	- .068	- .006
1873.434	11290	+ .129	- .092	+ .004

Table 4

Mean moments of maxima of DR Lyrae

Max.hel.JD	E	O-C
2437168.409	0	+0.006
8938.338	2129	- .010
9377.296	2657	- .004
9998.321	3404	+ .002
40801.405	4370	+ .002
1486.453	5194	+ .017
1920.389	5716	- .012

Table 5

Mean moments of maxima of FH Vulpeculae

Max.hel.JD	E	O-C	Note
2418568.27	-43065	+0.16	Moscow
36027.450	0	- .004	vis.
7176.413	+ 2834	+ .003	Odessa
7883.456	+ 4578	- .004	"
8638.358	+ 6440	+ .009	"
9024.309	+ 7392	+ .001	" +Moscow
40121.370	+10098	.000	Odessa
2665.368	+16373	- .003	"

Table 6

Mean moments of maxima of FK Vulpeculae

Max.hel.JD	E	O-C	Note
2416729.31:	-44573	-0.07:	Moscow
29170.30:	-15911	+ .09:	"
36076.414	0	- .009	Odessa
6465.328	+ 896	- .006	"
7172.406	+ 2525	- .001	"
7886.432	+ 4170	+ .008	"
8291.404	+ 5103	+ .009	"
9029.294	+ 6803	+ .009	"
9689.487	+ 8324	+ .008	Moscow
42276.414	+14284	- .021	Odessa
2638.444	+15118	+ .010	"

