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The latest ascending branch in the long-term light curve of MV Lyrae

In continuation of our programme for study of low-state cataclysmic binaries (Kraicheva (1988), Kraicheva, Antov, Genkov (1987, 1989), Popov, Kraicheva (1991)) some photometric data for MV Lyrae were obtained during 1988-1991. We observed the star on 58 plates of the Rozhen 50/70 Schmidt telescope and one plate of the Rozhen 2m RCC telescope. The B system of comparison star magnitudes of Andronov and Shugarov (1982) was used. Photometric measurement of the plates was carried out on the automatic iris photometer Ascoris (Carl Zeiss, Jena) at NAO "Rozhen". On plates not good enough for measurements, estimates were made by the Nijland-Blazhko method. In Table 1 and in Fig. 1 the results of our observations are presented; colons denote values of less weight. The underlined magnitude is that from plate of 2m telescope. Our observations include the ascending branch of the long-term light curve and complete the curve of Wenzel and Fuhrmann (1989), Fuhrmann and Wenzel (1990).

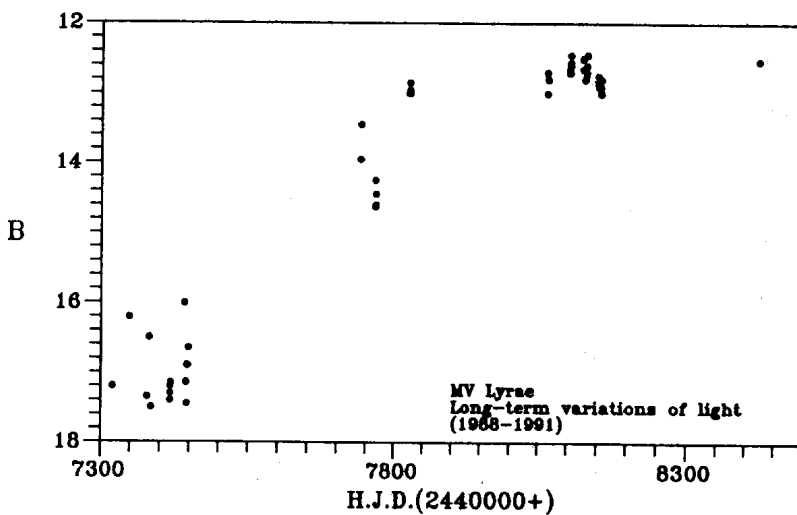


Fig. 1

It should be noted that:

1. The amplitudes of brightness changes may reach $1^m.5 - 2^m.0$ in low and intermediate state which is essentially larger than the values of $0^m.1 - 0^m.5$ obtained for the active state.
2. The decrease in the brightness of MV Lyrae from $12^m.5$ to $18^m.0$ according to Romano and Rosino (1980) occur for about a month. The ascent, however, corresponding to our observations and those of Wenzel and Fuhrmann (1989) lasts considerably longer about 1-1.5 years.

Table 1

Photographic Observations in B of MV Lyrae

HJD 2440000+	B	HJD 2440000+	B	HJD 2440000+	B
7320.431	17.20	7765.465	14.63	8125.426	12.65
7348.440	16.21:	7765.492	14.25:	8128.371	12.65
7379.416	17.35:	7766.454	14.60	8128.390	12.80
7382.447	16.50	7766.480	14.45	8128.408	12.80
7386.348	<u>17.50</u>	7824.406	13.00	8130.387	12.75
7417.360	17.30	7825.292	12.95	8130.435	12.75
7417.386	17.40	7825.311	12.85	8131.396	12.70
7417.486	17.20	7826.266	13.00	8131.414	12.60
7418.397	17.16	8064.524	12.70	8132.412	12.45
7418.427	17.15	8064.546	13.00	8150.406	12.87
7441.459	16.01	8066.432	12.80	8150.429	12.75
7444.296	17.15	8066.523	12.80	8151.469	12.90
7444.326	17.14	8102.440	12.65	8154.353	12.80
7445.316	17.45	8102.459	12.70	8154.377	12.95
7445.342	16.90	8103.483	12.70	8155.401	12.90
7447.309	16.90	8103.507	12.60	8155.425	13.00
7448.294	16.65	8104.471	12.45	8156.321	12.80
7739.422	13.95	8104.488	12.55	8156.345	13.00
7739.447	13.95	8104.520	12.60	8422.330	12.53
7740.464	13.45	8125.384	12.50		

Besides photographic estimates of the brightness, in July 1991, we started photoelectric observations of the star with the 60cm telescope of Belogradchik Astronomical Observatory. The photometer used and the data processing have been described by Antov et al. (1991).

Star "B" (see Walker, 1954) served as comparison star. The integration time was 10 sec. Magnitude estimates in a standard UBV system are presented in Table 2.

Table 2

Photoelectric UBV Observations of MV Lyrae

HJD 2440000+	V	B-V	U-B
8449.478	12.178	-0.114	-1.069
8449.517	12.722	-0.236	-0.933
8450.389	12.611	-0.201	-1.030

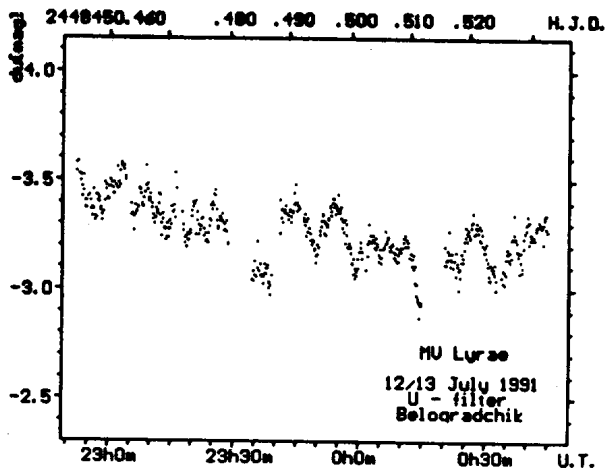


Fig. 2

In addition, a patrol with a duration of 1.5 hours was carried out in the "u" region on the night of July 12/13. Patrol observations (Fig. 2) revealed the existence of rapid variations in light with an amplitude up to $0^m.4$ within 5 minutes.

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