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ACCURATE POSITIONS FOR 38 VARIABLES IN A 5°×5° FIELD AROUND BL Lac

Photographs of the field around BL Lac were taken with the AFR-1 wide-field astrograph (D=23 cm, F=230 cm, 5.°5×5.°5 field) at Mt. Maidanak (Uzbekistan) in 1990–1992. The observations used the method described by Shokin (1991) which allows to attenuate brightness of bright reference stars. This reduces the influence of the brightness equation on positions of faint objects and makes it possible to determine their coordinates in a system very close to the fundamental one.

Positions of individual stars were derived from measurements of up to 15 plates. Table 1 contains equatorial coordinates, epochs of observations, and GSC numbers (Lasker et al., 1990) for 38 variable stars in a 5°× 5°field. The first column contains GCVS names or NSV catalog numbers. Asterisks mark stars whose positions are most accurate (better than to 0.″1); for the majority of stars, the positions are accurate to 0.″1-0.″3. For four stars (V665 Cyg, V666 Cyg, V668 Cyg, V672 Cyg), the derived positions are least accurate (to about 0.″3) because we had to use three steps for reductions to the source catalog. The Palomar prints show V668 Cyg as two components, partially overlapping. The coordinates in Table 1 refer to the eastern, red component; its variability is evident from two Palomar O-prints.

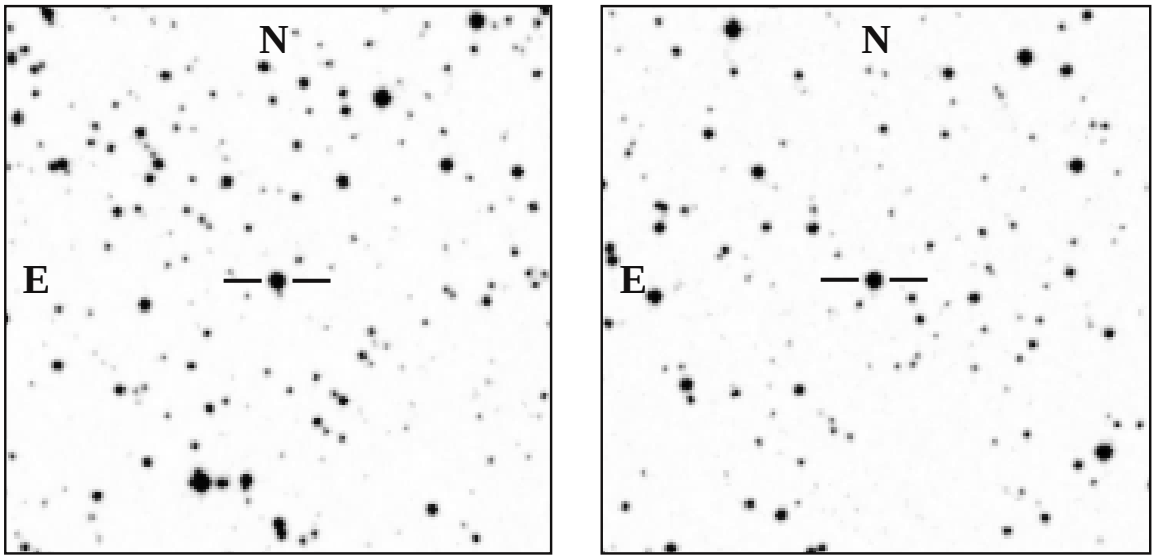

Figure 1

Table 1

Star		$\alpha_{2000.0}$	$\delta_{2000.0}$	Epoch	GSC
UZ	Cyg	$21^h59^m14^s.314$	$+44°21'34''.58$	90.81	3197.0221
GT	Cyg	21 50 43.617	+42 54 11.52	90.81	3193.1551
MN	Cyg	21 58 01.526	+44 26 38.57	90.81	3197.1716
MU	Cyg	21 59 13.506	+44 42 00.43	90.81	3197.0616
V665	Cyg	21 49 15.956	+43 03 36.49	53.70	
V666	Cyg	21 49 25.862	+43 22 25.36	53.70	
V668	Cyg	21 49 56.837	+40 56 31.94	53.70	
V670	Cyg	21 50 19.432	+42 46 27.56	90.81	3193.0469
V672	Cyg	21 51 21.443	+44 39 50.12	75.30	
V673	Cyg*	21 51 37.755	+43 09 58.75	92.69	3197.2745
V676	Cyg	21 52 59.131	+44 18 19.25	90.81	
V677	Cyg	21 53 17.670	+44 03 23.08	90.81	3197.0163
V683	Cyg	21 57 32.615	+44 10 19.71	90.81	
V1093	Cyg	21 53 29.263	+44 05 05.35	90.81	3197.0545
V1096	Cyg*	21 55 52.164	+41 35 46.72	92.69	
RS	Lac	22 12 52.535	+43 45 01.03	90.81	3211.1056
RY	Lac	22 12 15.555	+43 50 04.23	90.81	3211.0260
BI	Lac	22 00 49.035	+42 45 39.25	90.81	3206.0669
BK	Lac*	22 02 19.725	+43 34 44.38	90.73	3210.1226
BL	Lac*	22 02 43.287	+42 16 39.92	90.73	
BO	Lac	22 14 56.692	+42 20 44.46	90.81	3207.0267
DE	Lac*	22 10 07.774	+40 55 10.63	90.73	3203.0565
DL	Lac	21 58 37.128	+41 46 24.61	90.81	3193.0554
EL	Lac	22 08 53.723	+42 16 21.26	90.81	3206.1935
ET	Lac*	21 59 06.287	+41 03 55.98	92.69	3189.0410
FU	Lac	22 00 26.741	+43 51 19.66	90.81	
GN	Lac	22 06 51.500	+43 22 57.20	90.81	3210.1444
KQ	Lac*	22 15 51.763	+40 25 13.08	92.69	3203.0344
V351	Lac*	22 00 48.151	+42 30 43.24	91.71	3206.0663
V352	Lac	22 01 11.566	+43 07 32.31	90.81	3210.1466
NSV 13904*		21 51 43.222	+43 09 23.62	92.69	
NSV 13917		21 52 39.266	+43 39 08.39	90.81	3197.1927
NSV 13922		21 52 58.166	+44 00 55.25	90.81	
NSV 13975		21 57 26.500	+42 58 18.65	90.81	
NSV 13976		21 57 29.886	+44 41 48.46	90.81	
NSV 13978		21 57 30.936	+43 20 56.83	90.81	
NSV 13989		21 59 00.750	+44 43 50.27	90.81	3197.0828
NSV 13990		21 59 23.863	+43 53 21.62	90.81	3197.0357

Table 2

Star	PPM	HIC
NSV 13907	062147	
NSV 13974	087224	
RT Lac	062368	108728
BG Lac	062336	108630
CM Lac	062327	
CS Lac	062318	
CX Lac	062506	
VZ Cyg	062131	107899

Table 2 contains PPM catalog (Röser and Bastian, 1991) identifications for eight bright variable stars in the program field; three of them are also identified with the HIPPARCOS input catalog (1992). We present finding charts (earlier never published) for GT Cyg and EL Lac; we have confirmed the variability of the corresponding stars using plates taken with the Sternberg Institute's 40 cm astrographs in Crimea. Each charts covers a $5' \times 5'$ field.

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