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V AND B - V MAGNITUDES OF BRIGHT CEPHEIDS FROM ELECTROSPEC-
TROPHOTOMETRIC OBSERVATIONS

At the high-altitude station "Terskol" (Main Astronomical Observatory of the Ukrainian Academy of Sciences) over the period 1974-1978 a number of variables were observed with a Seya-Namioka scanner. Scannograms were treated by the relative electrospectrophotometry method (1) with use of eleven standards of the Odessa spectrophotometry system OAO -77 (2), (3) as the comparison stars. The system is based on the calibration of α Lyr, by Heyes and Hatham (4). Energy distribution in the radiation spectra of classical cepheids δ Cep, ζ Gem and η Aql have been obtained in the range 3200-7700 Å with a step of 50 Å in absolute units.

The V and B-V magnitudes were calculated using the curves of the UBV correction of the Johnson system by Straizys (5).

Light variation phases were obtained from the second edition to GCVS (6) and from Scarfe (8) for ζ Gem. The moments of observations to the solar centre are not given. The V and B-V magnitudes are in good agreement with the mean curves (Nikolov, 7) for δ Cep and η Aql and with the data by Scarfe (or Eggen) for ζ Gem. A significant scattering of points was observed on the curves of the B-V and η Aql in the area of the descending branch. The curves of V and B-V of ζ Gem satisfy better Scarfe's elements than those of GCVS. The observational results are given in Tables I-III.

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Table I

		δ Cep		
	J.D. 244...	φ	V	B-V
1	2334.341	0.324	4 ^m .055	0 ^m .800
2	2506.561	0.417	4.115	0.828
3	2507.561	0.603	4.288	0.893
4	3722.520	0.007	3.490	0.490
5	3725.416	0.547	4.220	0.895
6	3791.365	0.836	4.168	0.808
7	3792.314	0.013	3.509	0.462
8	3797.313	0.944	3.600	0.528
9	3814.356	0.120	3.718	0.594

Table II

		ζ Gem			
	J.D. 244...	φ	V	B-V	φ_{Sc}
1	1997.545	0.828	3 ^m .790	0 ^m .692	0.847
2	2108.438	0.752	3.848	0.796	0.771
3	2112.354	0.138	3.789	0.778	0.157
4	2113.362	0.237	3.887	0.839	0.257
5	2437.331	0.151	3.814	0.797	0.173
6	2443.361	0.748	3.865	0.760	0.768
7	2445.421	0.950	3.697	0.713	0.970
8	2476.330	0.995	3.624	0.655	0.016
9	2479.332	0.291	3.944	0.861	0.311
10	2481.331	0.487	4.124	0.927	0.508
11	2776.494	0.565	4.081	0.966	0.588
12	2778.526	0.765	3.861	0.724	0.787
13	2779.496	0.861	3.712	0.701	0.883
14	3791.571	0.565	4.107	0.954	0.592
15	3792.575	0.664	3.994	0.851	0.691
16	3795.572	0.959	3.664	0.706	0.986
17	3797.580	0.157	3.781	0.811	0.184
18	3813.462	0.720	3.867	0.785	0.749
19	3839.597	0.296	3.923	0.873	0.324
20	3840.604	0.395	4.125	0.950	0.423

Table III

		η Aql		
	J.D. 244...	φ	V	B-V
1	1847.439	0.992	3 ^m .515	0 ^m .639
2	1868.496	0.926	3.736	0.728
3	1900.383	0.369	3.900	0.911
4	1906.389	0.206	3.768	0.800
5	1907.327	0.337	3.849	0.832
6	1935.385	0.246	3.798	0.855
7	2139.564	0.697	4.368	1.046
8	2141.553	0.974	3.523	0.644
9	2150.551	0.228	3.836	0.865
10	2166.460	0.444	4.148	1.023
11	2168.522	0.732	4.291	1.017

Table III (cont.)

	J.D. 244...	φ	V	B-V
12	2175.516	0.707	4.331	1.059
13	2327.200	0.842	4.016	0.874
14	2329.188	0.119	3.694	0.794
15	2330.270	0.270	3.859	0.844
16	2331.214	0.401	3.984	0.921
17	2332.267	0.548	4.247	1.017
18	2333.233	0.683	4.348	1.053
19	2760.124	0.165	3.735	0.793
20	3242.567	0.390	4.001	0.945
21	3243.552	0.527	4.201	0.982
22	3244.550	0.666	4.324	1.085
23	3245.543	0.805	4.148	0.939
24	3274.518	0.842	3.994	0.865
25	3275.509	0.980	3.485	0.695
26	3280.482	0.673	4.348	1.037
27	3291.470	0.204	3.860	0.876

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