

**PHOTOELECTRIC BVR_c OBSERVATIONS AND CLASSIFICATION
 FOR V1359 AQUILAE**

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Variability of V1359 Aql was discovered by Henden (1980), who reported 8 UBV measurements spanning 136 days, with the peak-to-peak amplitude being almost 0.2 mag. On the base of those data, the star was classified, in GCVS-IV, as a possible s-Cepheid. But Poretti and Mantegazza (1991) obtained 18 differential measurements in V spanning 35 days and not revealing light variations exceeding 0.02 mag.

Table 1

JD hel 2450000+	<i>V</i>	<i>B-V</i>	<i>V-R_c</i>	JD hel 2450000+	<i>V</i>	<i>B-V</i>	<i>V-R_c</i>
0628.3994	9.192	1.362	.780	0984.4104	9.329	1.398	.787
0629.3998	9.212	1.374	.779	0985.4072	9.294	1.390	.777
0632.4030	9.232	1.382	.787	0993.3919	9.226	1.367	.817
0633.3758	9.257	1.370	.789	0995.3875	9.254	1.373	.826
0634.3682	9.239	1.376	.798	0996.4012	9.185	1.373	.812
0635.3788	9.229	1.386	.793	0997.3886	9.235	1.378	.784
0636.3627	9.238	1.391	.783	0998.3714	9.205	1.356	.795
0639.3641	9.300	1.406	.803	0999.3707	9.203	1.363	.754
0644.3370	9.261	1.359	.826	1000.3652	9.175	1.358	.809
0647.2855	9.199	1.352	.769	1002.3837	9.166	1.371	.771
0648.2862	9.142	1.383	.741	1003.3593	9.181	1.346	.796
0650.3428	9.114	1.362	.726	1004.3597	9.167	1.370	.778
0651.3141	9.111	1.358	.744	1006.3510	9.165	1.383	.782
0652.3401	9.112	1.384	.815	1007.3599	9.178	1.358	.790
0653.3059	9.143	1.352	.730	1008.3431	9.186	1.340	.810
0654.3272	9.111	1.348	.813	1026.3536	9.161	1.327	.788
0657.2983	9.099	1.325	.794	1035.3607	9.077	1.360	.759
0972.4446	9.275	1.373	.813	1037.2621	9.083	1.302	.800
0973.4341	9.295	1.401	.811	1038.2504	9.073	1.309	.771
0982.4273	9.293	1.363	.793	1041.2531	9.051	1.305	.782
0983.4095	9.291	1.388	.773	1042.2206	9.060	1.305	.799

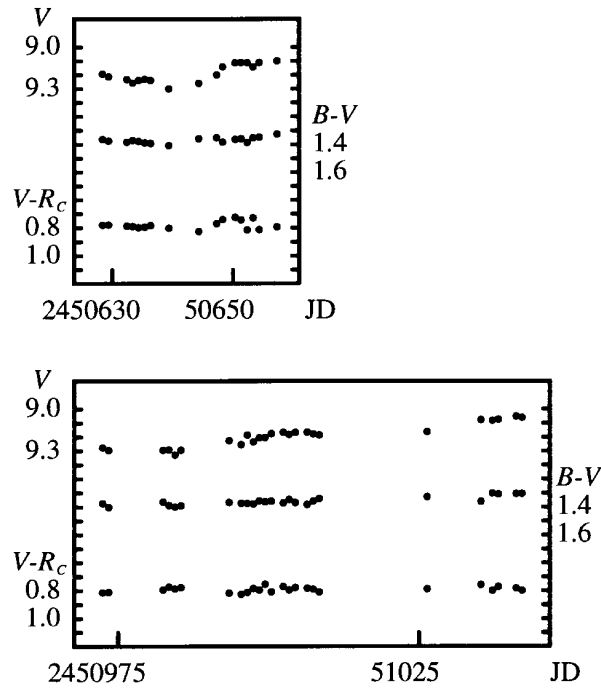


Figure 1.

To clarify the situation, Berdnikov and Turner (1995a,b) and Berdnikov and Vozyakova (1995) conducted photoelectric monitoring of V1359 Aql during three observing runs, and it was found that the data in each individual run confirm the conclusion of Poretti and Mantegazza (1991), however there exist small differences of the mean brightness between runs. As a result, Berdnikov and Turner (1995a) concluded that if these differences were real V1359 Aql might be classified as a semiregular variable.

To solve the matter, we were continuing to monitor this star with the 60-cm reflector of Mt. Maidanak Observatory (Uzbekistan). During two observing runs in 1997 and 1998, 42 BVR_c photoelectric measurements were obtained (Table 1); the accuracy of the individual data is near 0.01 mag in all filters. The light curves are presented in Figure 1 for each run separately. Trends in the brightness are distinctly seen on both graphs. Therefore, we conclude that, most likely, V1359 Aql is a semiregular variable (judging from its color, of SRD type).

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References:

- Berdnikov, L.N., Turner, D.G., 1995a, *IBVS*, No. 4201
 Berdnikov, L.N., Turner, D.G., 1995b, *Pis'ma Astron. Zh.*, **21**, 603
 Berdnikov, L.N., Vozyakova, O.V., 1995, *Pis'ma Astron. Zh.*, **21**, 348
 Henden, A. A., 1980, *MNRAS*, **192**, 621
 Poretti, E., Mantegazza, L., 1991, *IBVS*, No. 3687