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NEW VARIABLE IN PERSEUS

During the analysis of results from photometric monitoring of members of the Alpha Persei cluster, a new variable star has been found. Located near the cluster member AP125 (Prosser 1991,1992), the new variable was initially chosen as a comparison star to AP125. The variable's position is approximately; $RA = 3^h 16^m 4.6^s$, DEC = $49^{\circ}56'3''$ (1950). The variable's magnitude is approximately $V \simeq 11.4$. The accompanying finding chart (north at top, east at left) in Figure 1 is approximately 6.5 arcminutes on a side and identifies the variable (labeled 'A'), AP125, and two other comparison stars, B and C. A check of the GCVS and NSV catalogs did not reveal a previous known variable at the position of star A.

Table 1 provides a listing of the relative V magnitudes between the variable A and the two comparison stars, B & C. Observations at 22.87751, 32.71216, 32.76481, 32.76612, and 32.85307 are considered to be less accurate due to near-saturation counts for the variable A. The CCD photometry was obtained with the Whipple Observatory 48-inch telescope on Mt. Hopkins, Arizona during late October, early November 1992. Period analysis was performed in the same manner as described in Prosser, Schild, Stauffer and Jones (1993). A period of approximately 21.6 hours was found with a minimum occuring near JD = 2448927.937. Comparison star C may also be variable at the level of a few hundredths of a magnitude. Figure 2 illustrates the resulting light curve for the new variable, which may be an eclipsing binary system.

The new variable was not surveyed in the proper motion study of Heckmann, Dieckvoss, and Kox (1956), nor was it recovered as a candidate Alpha Persei cluster member in Prosser (1991,1992). It may have been rejected for consideration by Prosser however due to poor measurements on the Palomar Schmidt plates because of image blending from neighboring stars. It is currently unknown therefore whether the variable 'A' is or is not a member of the Alpha Persei open cluster.

Table 1. Relative Photometry

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JD - 2	448900.0	A – B	A – C	B – C	JD - 2448900.0	A – B	A – C	B – C
22.7	4287	-0.737	-0.881	-0.144	29.75503	-0.452	-0.600	-0.148
22.7	7038	-0.746	-0.897	-0.151	29.78906	-0.483	-0.620	-0.137
22.7	7309	-0.746	-0.903	-0.157	29.81661	-0.541	-0.692	-0.151
22.8	31929	-0.755	-0.897	-0.142	29.84480	-0.623	-0.787	-0.164
22.8	37751	-0.767	-0.906	-0.139	29.87854	-0.690	-0.840	-0.150
22.8	87851	-0.768	-0.908	-0.140	29.95160	-0.728	-0.891	-0.163
22.9	1691	-0.767	-0.889	-0.122	29.98456	-0.736	-0.879	-0.143
22.9	5326	-0.761	-0.901	-0.140	30.00782	-0.735	-0.898	-0.163
22.9	5444	-0.767	-0.898	-0.131	30.74444	-0.572	-0.697	-0.125
27.6	0112	-0.759	-0.914	-0.155	30.87095	-0.731	-0.861	-0.130
27.6	0280	-0.757	-0.919	-0.162	30.94438	-0.746	-0.898	-0.152
27.6	6138	-0.743	-0.915	-0.172	30.96763	-0.735	-0.883	-0.148
27.6	8909	-0.741	-0.882	-0.141	30.97064	-0.749	-0.889	-0.140
27.7	1890	-0.740	-0.889	-0.149	31.02223	-0.760	-0.902	-0.142
27.7	4883	-0.730	-0.879	-0.149	32.63892	-0.715	-0.878	-0.163
27.7	8912	-0.720	-0.868	-0.148	32.66943	-0.719	-0.877	-0.158
27.8	9100	-0.544	-0.700	-0.156	32.71216	-0.723	-0.859	-0.136
27.8	89508	-0.531	-0.687	-0.156	32.71343	-0.729	-0.863	-0.134
27.9	5716	-0.462	-0.603	-0.141	32.76481	-0.741	-0.886	-0.145
28.6	34343	-0.729	-0.892	-0.163	32.85307	-0.746	-0.911	-0.165
28.8	1252	-0.472	-0.596	-0.124	32.85446	-0.754	-0.922	-0.168
29.0	0296	-0.720	-0.891	-0.171	32.92785	-0.763	-0.900	-0.137
29.6	8399	-0.608	-0.745	-0.137	33.01792	-0.762	-0.916	-0.154

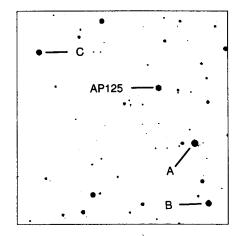


Figure 1

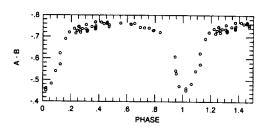


Figure 2

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