PHOTOELECTRIC LIGHT CURVES FOR T MONOCEROTIS AND TT AQUILAE

by

HOWARD J. LANDIS
Landis Observatory
2395 Wood Hill Lane
East Point, GA 30344

Abstract

This paper presents photoelectric data on two stars that are in the AAVSO Cepheid program.

* * * * *

Between January 14 and April 11, 1973, thirty PEP visual observations were made on 061907 T Monocerotis. In Figure 1 the data are plotted in heliocentric phase from the ephemeris T = JD 2432245.36 + 27.0205E, and magnitudes were determined differentially from the comparison star 13 Monocerotis ($4^m.50$). Epsilon Monocerotis ($4^m.29$) was used as a check star to verify the constancy of the comparison star. (Note that the identification chart for this variable has interchanged the positions of these two stars. Also, on the basis of measures of the comparison stars, I have recommended to T. A. Cragg that the magnitudes of four of the five stars in the sequence be altered by $0^m.1$.) The O-C for T Monocerotis appears to be approximately 0.4 days.

Between May 3 and November 14, 1973, forty-seven PEP visual observations were made on 190301 TT Aquilae, and the data are plotted in Figure 2 with phases computed from the ephemeris T = JD 2437236.10 + 13.7546E. The comparison star was No. 74 on the CBF chart dated 6/70, and No. 57 was used as check star. Magnitudes were determined differentially from No. 74. The O-C of this star appears to be very close to zero.

Details of the instruments used to obtain these data may be found in Landis (1973).

REFERENCE

Landis, H. J. 1973, J.A.A.V.S.O., 2, 38.

Table 1

OBSERVATIONS OF T MONOCEROTIS, 061907

JD 2,441,000 +

JD	m	PHASE	JD	m	PHASE	JD	m	PHASE
697.62	6.77	.8183	733.57	5.76	.1487	760.53	5.77	.1465
705.61	5.68	.1140	734.57	5.84	.1857	761.54	5.83	.1837
706.60	5.76	.1508	735.57	5.89	.2227	763.54	5.94	.2577
707.60	5.82	.1876	737.53	5.98	.2952	764.53	6.00	.2944
710.61	6.00	.2990	738.60	6.05	.3348	767.57	6.16	.4070
712.64	6.12	.3741	741.60	6.24	.4458	775.54	6.55	.7018
720.56	6.55	.6672	742.55	6.29	.4810	781.55	6.33	.9242
721.54	6.56	.7035	743.56	6.34	.5184	782.56	5.99	.9616
725.56	6.56	.8523	754.54	6.30	.9247	783.57	5.68	.9990
730.55	5.57	.0369	755.57	5.97	.9631	784.59	5.63	.0366

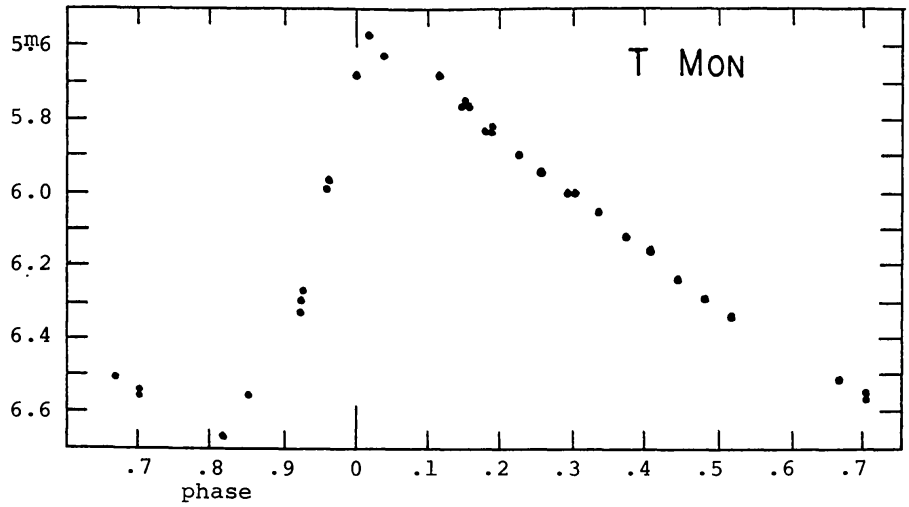

Figure 1. Photoelectric light curve of T Monocerotis.

Table 2

OBSERVATIONS OF TT AQUILAE, 190301

JD	m	PHASE	JD	m	PHASE	JD	m	PHASE
806.87	6.90	.3084	914.63	6.59	.1434	965.53	7.16	.8436
807.85	7.02	.3801	916.58	6.86	.2874	966.57	7.11	.9193
812.85	7.40	.7435	917.58	6.97	.3576	967.53	6.44	.9886
818.84	6.67	.1792	918.58	7.09	.4302	974.53	7.22	.4974
819.82	6.79	.2498	919.57	7.20	.5021	977.51	7.43	.7145
820.81	6.91	.3219	920.58	7.35	.5760	978.52	7.27	.7880
823.82	7.30	.5413	940.61	6.41	.0315	979.52	7.16	.8605
824.82	7.42	.6134	944.56	6.91	.3190	980.52	7.05	.9333
832.81	6.67	.1945	945.53	7.02	.3897	981.52	6.36	.0057
833.78	6.81	.2652	946.55	7.15	.4640	982.52	6.53	.0785
836.77	7.16	.4825	950.59	7.36	.7573	986.53	6.99	.3704
850.72	7.23	.4968	954.54	6.49	.0445	988.51	7.27	.5162
856.76	7.04	.9363	958.55	6.92	.3363	998.51	6.79	.2409
857.75	6.39	.0081	959.59	7.04	.4119	999.50	6.90	.3131
885.66	6.43	.0368	960.51	7.19	.4784	2001.49	7.17	.4576
892.65	7.31	.5452	963.58	7.45	.7015			

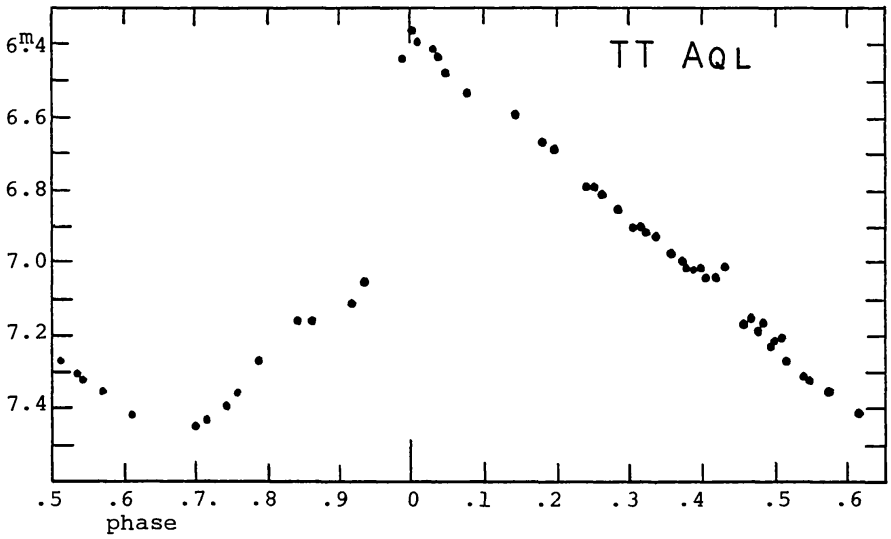

Figure 2. Photoelectric light curve of TT Aquilae.