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A CONTINUATION OF PHOTOELECTRIC PHOTOMETRY OF RHO CASSIOPEIAE

This paper represents a continuation of previous photoelectric observations of the variable star ρ Cassiopeiae (Leiker et al., 1990, 1989, 1988, 1987). ρ Cassiopeiae (ρ Cas, HR 9045, HD 224014, SAO 035879) is a supergiant (F8pIA) star (Percy & Keith, 1985). It was discovered to be a variable in 1900 by Louise D. Wells (Pickering, 1901). Much of the time this star was confined to a brightness between 4.1m and 5.1m (Bailey, 1978). However, between August 1945 and June 1947 ρ Cas decreased in brightness more than a magnitude (Gaposchkin, 1949). After it recovered from this minimum, ρ Cas continued its irregular variation in brightness between 4.1m and 5.1m.

ρ Cas was observed by Leiker, Hoff, and Caruso at Oak Ridge Observatory, Harvard, MA from September 1990 through February 1991. A 0.4 meter Cassegrain telescope and a STARLIGHT-1 photon counting photometer with standard B and V filters was used. This is the same photometer that was used in our previous work. HR 9010 (HD 223173, SAO 35761, K3 II, V = 5.51 m, B-V = 1.65) was used as the comparison star. These delta magnitudes are not corrected for color or extinction. Standard deviation (σ) was calculated in the usual manner from three delta magnitudes. Table I lists the ΔV and ΔB magnitudes. Figures 1 and 2 are graphical representations of the data presented in Table I.

Table I. ΔV and ΔB magnitudes of ρ Cas obtained by Leiker, Hoff, and Caruso

HJD	ΔV_m	σ	HJD	ΔB_m	σ
2448107.7	-1.001	0.049	2448107.73	-1.416	0.004
2448116.6	-0.989	0.027	2448116.6	-1.441	0.010
2448130.6	-1.044	0.002	2448130.65	-1.458	0.001
2448138.6	-1.060	0.049	2448138.6	-1.455	0.020
2448145.6	-1.055	0.024	2448145.6	-1.481	0.011
2448153.54	-1.055	0.014	2448153.56	-1.466	0.009
2448155.52	-1.060	0.014	2448155.54	-1.487	0.017
2448159.58	-1.048	0.016	2448159.59	-1.464	0.006
2448166.61	-1.019	0.021	2448166.63	-1.428	0.006
2448169.7	-1.021	0.007	2448169.72	-1.396	0.011
2448180.72	-1.046	0.003	2448180.73	-1.447	0.002
2448189.49	-1.029	0.009	2448189.51	-1.427	0.009
2448192.6	-1.008	0.014	2448192.61	-1.419	0.001
2448196.52	-1.011	0.002	2448196.53	-1.418	0.004
2448200.66	-0.992	0.009	2448200.67	-1.398	0.011
2448204.65	-1.020	0.001	2448204.67	-1.423	0.004
2448211.76	-1.029	0.007			
2448215.66	-0.986	0.024			
2448226.56	-1.021	0.011	2448226.58	-1.397	0.019
2448285.47	-0.961	0.018	2448285.5	-1.341	0.007
2448289.51	-0.979	0.004	2448289.52	-1.309	0.002
2448300.48	-1.000	0.009			

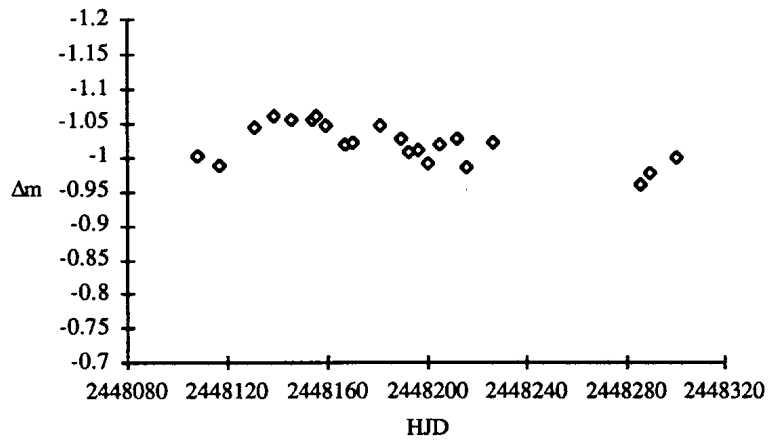


Figure 1. ΔV magnitudes of ρ Cas obtained by Leiker, Hoff, and Caruso

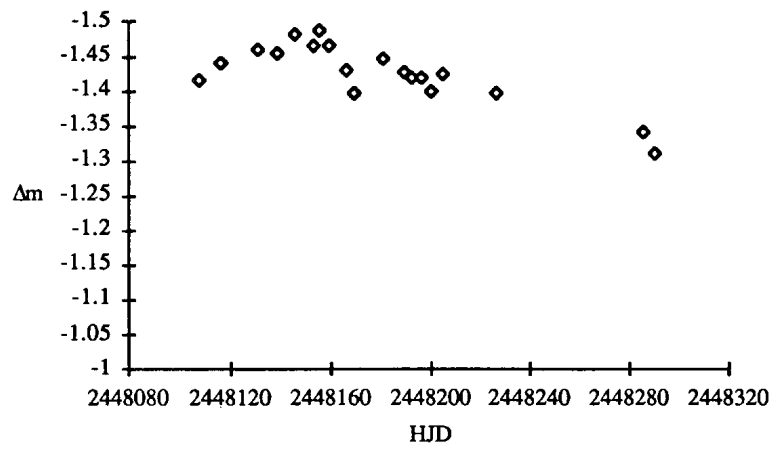


Figure 2. ΔB magnitudes of ρ Cas obtained by Leiker, Hoff, and Caruso

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