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PHOTOMETRIC OBSERVATIONS OF THE VARIABLE (?) UV-BRIGHT STAR K1082 IN M15

We present further observations of K1082 in M15, made to try to confirm the 2-hour variation observed by Chu (1977) and not found by Smith et al. (1979). Photoelectric magnitudes were obtained by RAS with the 1.3-m reflector at Kitt Peak, and by MHL with the 1.5-m Catalina reflector (University of Arizona) at Mt. Lemmon. Photographic magnitudes are from blue plates taken with the 1.5-m Wyeth reflector of Harvard College Observatory's Agassiz Station. The data are presented in Table I.

On the nights during which several observations were made, we find no evidence for a 2-hour variation. There seems, however, to be a possibly significant difference between mean magnitudes and colors on different nights. The photographic observations from Agassiz still are about 0.1 mag fainter than other observations (see Smith et al.); this effect may be due to the much lower altitude of Agassiz Station as compared to the other sites, combined with the rather blue color of K1082 compared to the photographic standards.

Thus we suggest that there is currently no short-period variation of K1082, but variations over periods longer than several hours remain a distinct possibility.

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References:

Chu, Y.-H. 1977, Chinese Astronomy 1, 302.

Smith, H. A., Millis, A. J., and Liller, M. H. 1979, Publ. Astron. Soc. Pacific 91, 671.

Table I. Magnitudes for K1082 in M15

$JD_{Hel.}$ 2,440,000+	Photoelectric V	B-V	U-B	Photographic B	Observatory
3987.812				15.37	Agassiz
4022.910	14.98	+.25	+.16		KPNO
.921	14.96	+.25			"
.931	14.97	+.23			"
.942	14.99	+.20			"
.952	14.96	+.24	+.21		"
4023.927	15.00	+.23	+.28		"
.933	15.00	+.23			"
.949	15.02	+.18	+.23		"
.953	15.00	+.23			"
.958	15.02	+.21			"
4048.896	14.92	+.26			Mt. Lemmon
.903	14.93	+.26			"
.910	14.93	+.25			"
.917	14.94	+.25			"
4049.844	14.94	+.25			"
.851	14.93	+.26			"
.858	14.94	+.26			"
.865	14.93	+.26			"
.872	14.93	+.26			"
.881	14.92	+.27			"
.888	14.94	+.26			"
.895	14.93	+.26			"
.902	14.93	+.26			"
.916	14.92	+.27			"
.924	14.93	+.27			"
4050.757				15.36	Agassiz
.838	14.91	+.25			Mt. Lemmon
.845	14.91	+.26			"
.852	14.92	+.26			"
.859	14.92	+.26			"
.866	14.92	+.26			"
.872	14.89	+.27			"
4052.717				15.36	Agassiz
.736				15.34	"
4058.715				15.40	"
.736				15.34	"
.757				15.30	"
.777				15.36	"
4116.673				15.32	"
.704				15.28	"
.737				15.30	"
4134.651				15.34	"
4143.603				15.34	"
.631				15.38	"
.647				15.30	"
.659				15.34	"
.686				15.34	"