

COMMISSION 27 OF THE I. A. U.
 INFORMATION BULLETIN ON VARIABLE STARS

Number 1990

Konkoly Observatory
 Budapest
 1981 July 13

HU ISSN 0374-0676

PHOTOELECTRIC OBSERVATIONS OF VZ Cas

VZ Cas is a Mira-type variable star with a period of $169^d.28$. The spectral type of the star is M0e-M3e. The magnitude is $9^m.3 - 13^m.3$ (Kukarkin et al., 1976).

The star VZ Cas was observed as comparison for the eclipsing binary GG Cas along with BD + 55^o280. Later on it was found that this is already listed as a Mira-type variable. Observations were mainly taken with the 35-cm reflector of the Uttar Pradesh State Observatory using an unrefrigerated 1P21 photomultiplier and d.c. techniques. The mean differential magnitudes of VZ Cas are being reported with BD + 55^o280 taken as comparison star. The differential magnitudes are listed in Table I.

Table I.

Differential standard magnitudes of VZ Cas

(VZ Cas-BD+55 ^o 280)			(VZ Cas-BD+55 ^o 280)		
Julian Date	B	V	Julian Date	B	V
2438 722	1 ^m .46	1 ^m .20	2439 068	1 ^m .08	1 ^m .15
724	1.05	0.88	076	2.00	0.54
726	1.39	1.11	080	0.77	0.86
736	1.14	1.01	081	1.57	0.20
755	1.13	-0.07	083	0.90	1.07
757	1.21	0.02	086	1.78	0.16
758	0.81	-0.26	106	1.44	1.25
760	1.41	-0.17	110	0.97	1.10
766	1.73	0.17	434	1.66	0.59
767	1.55	0.10	448	1.69	-0.09
769	1.21	0.37	777	1.14	-0.16
2439 060	1.15	1.00	792	1.36	-0.18
066	1.40	1.12	2444 526	2.35	1.28

On the night of October 13, 1980 VZ Cas and BD + 55^o280 were observed along with standard stars in order to get their magnitudes and colours which are as follows:

Star	V	B-V
VZ Cas	12. ^m 27	+1. ^m 15
BD + 55 ^o 280	11.00	+0.08

During the observing season 1964-1965, VZ Cas was found to vary by about 1.^m4 and 0.^m9 in yellow and blue colours, respectively. The nightly observations, however, do not show a variation in the light.

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Reference:

Kukarkin, B.V., Fedorovich, V.P., Frolov, M.S., Kukarkina, N.P., Kurochkin, N.E., Medvedeva, G.L., Perova, N.B. and Pskovsky, Yu. P. 1976, Third Supplement to the General Catalogue of Variable Stars (3d. ed., Moscow).