

COMMISSION 27 OF THE I. A. U.
INFORMATION BULLETIN ON VARIABLE STARS
Number 2884

Konkoly Observatory
Budapest
24 March 1986
HU ISSN 0374 - 0676

THE VARIABILITY OF BD+60° 562

Bartolini et al. (1982) have noted variability of an undetermined nature for the star BD+60°562, noting a range in V magnitude of 9.95 to 10.05 and in (B-V) of +.39 to +.45 over a time spread of 230 days. In an effort to determine the type of variability of this star, differential BV photometry was carried out on 43 nights from October, 1984 to January, 1986 with the 0.6-m. telescope and automated photon-counting photometer with its uncooled EMI 9924A photomultiplier tube of the Corralitos Observatory. The comparison stars were those of Bartolini et al.: BD+60°493 (V=8.44; B-V=+.79) and BD+60°497 (V=8.80; B-V=+.57). Extinction and transformations to BV magnitudes were found by observations of standard stars.

No obvious variability either of short or long term was found for BD+60°562. The differential V and (B-V) magnitudes of BD+60°562 were compared to both comparison stars separately. The residuals from the mean for each difference were found and compared for evidence of variability of either BD+60°562 or its two comparison stars. Table I shows the results, where VAR denotes BD+60°562, COMP1 BD+60°493, and COMP2 BD+60°497. The mean value of ΔV for (COMP1-COMP2) was found to be -.36 (average residual 0.02) and that of $\Delta(B-V)$ as +.22 (.02), both in good agreement with the adopted magnitudes for the comparison stars. The mean V magnitude for BD+60°562 was 10.03 and its (B-V) +.32.

Table I Average residuals about the mean

	V Magnitude		(B-V) Magnitude	
	(COMPl-VAR)	(COMP2-VAR)	(COMPl-VAR)	(COMP2-VAR)
Mean	-1.58	-1.23	0.48	0.25
Av. Res.	.02	.02	.02	.02

The average residuals from the mean for the comparison stars with each other and the variable with each comparison being identical, there seems no compelling reason to assume that variability of BD+60°562 is indicated by the data taken. However, the average residuals from the mean were larger than expected and would mask small variations. Nonetheless, a change in V magnitude of 0.10 such as that observed by Bartolini et al. should have been obvious. Buscombe (1977) compiles spectral types of B9 V and A0 V for BD+60°562. It is tempting to suggest that perhaps an emission episode was in progress during the observations of Bartolini and colleagues, since their observations resemble the sort of longterm photometric variations undergone by some Be stars when active.

Special thanks are rendered to B. Goodrich for automation of the photometric system.

E.M. HALBEDEL

Corralitos Observatory
P.O. Box 16314
Las Cruces, NM 88004
U.S.A.

References:

- Bartolini, C., Custodi, P., Dell'atti, F., Guarnieri, A. & Piccioni, A.
1982, Inf. Bull. Var. Stars, No. 2139.
- Buscombe, W. 1977, MK SPECTRAL CLASSIFICATIONS: THIRD GENERAL CATALOGUE
(Evanston, IL).