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 INFORMATION BULLETIN ON VARIABLE STARS

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FIVE NEW VARIABLE STARS

During the past two years, we have searched for photometric variations in the light of 29 short-period stars in the Seventh Catalogue of the Orbital Elements of Spectroscopic Binary Systems (Batten et al. 1978). We observed through a V-filter with a computer-managed photon-counting photometer mounted on the 16-inch Boller and Chivens reflector of the Oak Ridge Station, and each spectroscopic binary was observed on from 8 to 50 nights relative to a nearby comparison star. Times of observation were reduced to phases using the catalogue value of the orbital period and an arbitrary epoch, and the observed magnitudes were corrected for differential extinction. Our level of detectability is estimated to be about 0.02 mag peak to peak.

We have found four stars whose light can be seen to vary smoothly with the period of the velocity variation, and these stars are listed in Table I.

Table I  
 Spectroscopic Binaries Showing Photometric Variations

No. in 7th Cat.	HD	Sp.	Period (days)	$\Delta V$ (mag.)	$K_1/K_2$ (km/sec)	Phase Min. <sup>1</sup>
12	1826	A5	1.4323	0.025	53.4/-	0.3
804	193536	B2V	2.9847	0.05	115.0/141.0	0.4
832	198784	B2V	3.3035	0.09	63.8/-	0.95
844	200776	B1IVp	2.9258	0.20 (ecl?)	62.5/-	
896	209961	B2V	2.1727	0.08	121.7/-	0.25

<sup>1</sup>Phase of one of the light minima computed with the catalogue period and arbitrary epoch June 1.0, 1980.

Their comparison stars are listed in Table II. These new varia-

Table II  
Comparison Stars

Variable	Comp. Star	B-V
HD	HD	
1826	1439	-0.66
193536	192983	-0.48
198784	197226	-0.74
200776	200595	-0.05
209961	SAO51686	-0.68

bles show the double-peaked curve that is characteristic of ellipsoidal variables. The fifth variable (HD 200776) has shown an abrupt drop in brightness by about 0.2-0.4 mag on five occasions. The phases of these drops do not seem consistent with a simple eclipse model.

Table III lists stars in the Seventh Catalogue of Spectroscopic Binaries that were found not to show variations with a peak-to-peak amplitude as great as 0.02 mag. Stars which may show varia-

Table III

Stars Showing No Variability Greater than  $\Delta V = 0.02$  Mag.  
Numbers in Seventh Catalogue

2	24*	33*	50	59	72	137	140	189	195
226	273	468?	584	599?	606	626	742	818*	834?
885*	909	920?	948*						

?Possible light variation.

\*More observations required.

bility near our limit of detection are indicated with queries.

A summary of the photometric detection of proximity effects in spectroscopic binaries is in preparation, and we would be grateful to learn the results of similar searches at other observatories.

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RICHARD E. McCROSKY and CHARLES A. WHITNEY

Center for Astrophysics  
Cambridge, MA 02138

Reference:

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