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ON THE VARIABILITY AND PERIOD OF BH DRACONIS

The star BH Draconis (BV 344, HD 178001, BD+57°1942) was reported by W. Strohmeier and R. Knigge to be an Algol type variable with photographic range 0.6 magnitude and period 1^d817232. We observed it photoelectrically on 10 nights during June, 1968 with the No. 3 16 in. telescope at KPNO. BV 344 is a visual double with separation of approximately 10 seconds of arc. With a small aperture it was possible to observe the two components separately and determine that the brighter of the two is the eclipsing binary. A complete primary and a complete secondary eclipse were observed and the time of primary eclipse has been used along with Strohmeier's initial epoch to determine a refined period.

Observed Minima

Minimum	Epoch	O-C	Observer
2425774.465	-7839	-0.000	Strohmeier
6439.610	-7473	+0.036	Strohmeier
6630.380	-7368	-0.004	Strohmeier
7624.402	-6821	-0.012	Strohmeier
7982.433	-6624	+0.023	Strohmeier
8460.315	-6361	-0.029	Strohmeier
8727.496	-6214	+0.018	Strohmeier
8965.552	-6083	+0.016	Strohmeier
9045.542	-6039	+0.048	Strohmeier
9352.631	-5870	+0.023	Strohmeier
40019.7882	0	+0.000	Burke
0397.7989	+ 208	+0.014	Burke

The elements are:

$$\text{Hel. Min.} = \text{JD } 2440019.7982 + 1^{\text{d}}81723857 \text{ E}$$

During 12 nights of observation in June and July 1969 another primary minimum was observed and preliminary results indicate that the eclipse is total with totality lasting 32 minutes. Changes in the prime comparison star from 1968 to 1969 have delayed the completion of the light curve but work on the star is continuing.

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