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A PERIOD CHANGE IN WY CANCRI

Chambliss (1965, 1975) presented epochs of minimum light for WY Cancri and combined these with previously published times of minimum light to get a period of 0.8293712^d , with a probable error of 1 in the last place. Chambliss noted the constancy of the period, while Ahnert (1973) noted that the period had remained constant for 40 years. Faulkner (1986) presented two epochs of minimum light which had small negative (O-C)'s using Chambliss's light elements. This suggests that a small period change may have occurred, though Faulkner did not comment on this. We present two new times of minimum light and a new set of light elements that indicate that the period has changed.

An Optec photometer was used on the 41cm David Irons telescope of the Charlotte Amateur Astronomy Club. Differential B and V measurements were made using BD+27°1701 as the comparison and BD+28°1672 as the check star. Because the size of the detector exceeded 40", no attempt was made to exclude the light of a faint companion 20" from WY Cancri (Chambliss, 1975). Because of the color of WY Cancri, the B curves had much more scatter than the V curves, so only the V curves were used to find epochs of minimum light. The Hertzsprung method was used for this, and the epochs are given as:

Hel. J.D.	E	(O-C)
2447202.7774	25,140	-0.0049
2447241.7580	25,187	-0.0047

where the residuals were computed using the light elements of Chambliss (1975)

Because these residuals are about 7 minutes, a new set of light elements was obtained by combining these two epochs of minimum light with those of Faulkner:

$$\text{H.J.D. MIN.I} = 2446025.9017 + 0^{\text{d}}.82936984\text{E}.$$

+2
+18

Note that this period is $0^{\text{s}}.12$ shorter than that of Chambliss, while the probable error in the period is about ten times smaller than this difference. The epochs of minimum light used to get the above light elements, as well as the residuals, are given below.

Hel. J.D.	E	(O-C)
2446025.9014	0	-0.0003
2446143.6726	142	+0.0004
2447202.7774	1,419	-0.0001
2447241.7580	1,466	+0.0001

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