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NOTES ON BV1481=AA CETI

The variable star BV1481 (1950.0: $\alpha = 1^h54^m40^s.6$, $\delta = 23°9'44''.9$), now named AA Ceti (Kukarkin et al., IBVS Nr.717), was discovered to be a variable on Bamberg patrol plates (IBVS Nr.586), and a set of light elements were calculated from times of faint light derived from these plates (IBVS Nr.587). Extensive photoelectric observations with the 30" reflecting telescope at the University of Florida's Rosemary Hill Observatory have shown these elements to be incorrect. A new period has been found based upon five times of minimum in each color determined by the Hertzsprung method, five estimated times of minimum from partial coverage of only one branch of an eclipse, and the best times of faint light determined from the Bamberg plates (1964-1969). These data and the weights applied in a linear least squares calculation are shown in Table 1. The resulting elements and probable errors are:

$$\text{Min I} = \text{JD(hel.)}\ 2441268.6869 = 0^d.53617353.E$$

$$\pm.0007 \quad \pm.00000050$$

The observed minus the calculated times of mid-eclipse are also given in Table 1 and are displayed graphically in Figure 1.

Over 250 observations in each color (UBV) have been made on 14 nights all tending to support the fact that these elements are correct. The light curve shows continuous variation between eclipses and the secondary eclipse is total.

Table 1

Julian Date (hel.)	E	Weight	O-C
2438728.319	-4738.0	2	+0.022
38995.594	-4239.5	1	+0.015
39006.549	-4219.0	1	-0.022
39060.417	-4118.5	1	-0.039
39383.507	-3516.0	1	+0.006
39404.394	-3477.0	2	-0.018
39444.359	-3402.5	1	+0.003
39761.491	-2811.0	2	-0.012
39768.483	-2798.0	1	+0.010
39771.463	-2792.5	1	+0.041
40530.392	-1377.0	1	+0.016
40566.285	-1310.0	2	-0.015
41261.7176	- 13.0	5	+0.0010
.7176	- 13.0	5	+0.0010
.7155	- 13.0	5	-0.0011
41264.6665	- 7.5	4	+0.0009
.6687	- 7.5	4	+0.0030
.6664	- 7.5	4	+0.0008
41268.6866	0.0	5	-0.0003
.6869	0.0	5	0.0
.6860	0.0	5	-0.0009
41281.5571	24.0	4	+0.0020
.5566	24.0	4	+0.0015
.5561	24.0	4	+0.0010
41315.6031	87.5	4	+0.0010
.6022	87.5	4	+0.0001
.6012	87.5	4	-0.0009
41317.481	91.0	2	+0.002
41563.853	550.5	2	+0.002
41607.836	632.5	1	+0.019
41620.664	656.5	2	-0.021
41630.603	675.0	3	-0.002

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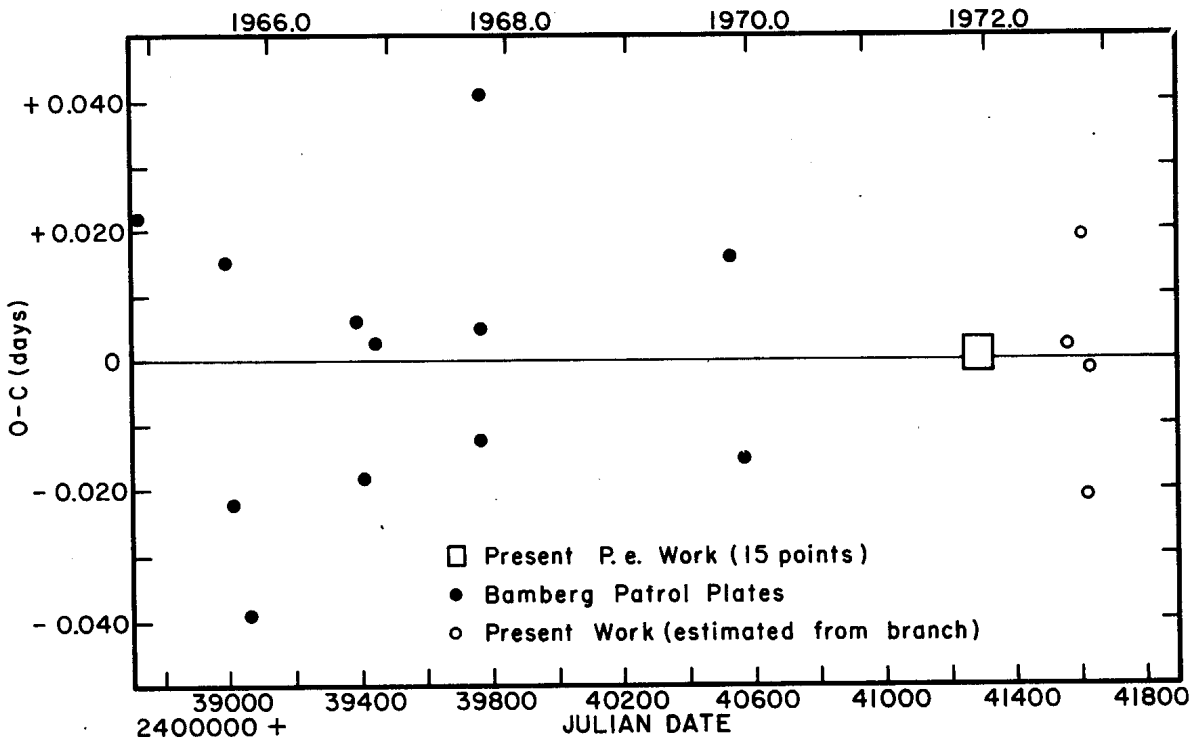
1966.0
1968.0
1970.0
1972.0
+ 0.040
+ 0.020
0
- 0.020
- 0.040
O-C (days)
Present P. e. Work (15 points)
Bamberg Patrol Plates
Present Work (estimated from branch)
39000
39400
39800
40200
40600
41000
41400
41800
2400000 +
JULIAN DATE