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UBV PHOTOMETRY OF AK VIRGINIS

The eclipsing binary AK Vir was observed photoelectrically on 3 nights in June 1968 with the Dyer Observatory 24-inch reflector. The results are presented here now because the observations are not sufficient for a light curve solution and no further observations are planned.

Column 1 lists the heliocentric Julian date. Columns 2, 3 and 4 list the differential V, B, and U magnitudes in the sense AK Vir minus comparison. The comparison star used was HD 123037, which is the visually brighter component of BD -17°4002.

Table A

24400..	ΔV	ΔB	ΔU	24400..	ΔV	ΔB	ΔU
23.6452	-	-	1.967	25.6991	3.540	-	-
.6460	-	1.862	-	.7004	-	3.436	-
.6468	2.095	-	-	.7017	-	-	3.557
.6478	2.093	-	-	.7024	-	-	3.675
.6490	-	1.832	-	.7036	-	3.417	-
.6502	-	-	1.945	.7050	3.496	-	-
.6566	2.058	-	-	.7099	3.383	-	-
.6581	-	1.727	-	.7108	-	3.213	-
.6593	-	-	1.803	.7120	-	-	3.365
.6601	-	-	1.821	.7130	-	-	3.423
.6614	-	1.754	-	.7145	-	3.180	-
.6625	2.084	-	-	.7158	3.291	-	-
25.6057	2.154	-	-	.7204	3.211	-	-
.6070	-	1.868	-	.7217	-	3.043	-
.6083	-	-	1.979	.7232	-	-	3.129
.6092	-	-	1.991	.7238	-	-	3.123
.6104	-	1.892	-	.7254	-	2.944	-
.6114	2.198	-	-	.7265	2.936	-	-
.6737	3.266	-	-	26.5870	2.065	-	-
.6748	3.299	-	-	.5880	-	1.798	-
.6795	3.408	-	-	.5892	-	-	1.931
.6809	-	3.290	-	.5898	-	-	1.921
.6822	-	-	3.455	.5906	-	-	1.922
.6829	-	-	3.439	.5918	-	1.746	-
.6840	-	3.374	-	.5926	2.049	-	-
.6850	3.483	-	-	.6006	2.032	-	-
.6891	3.506	-	-	.6018	-	1.746	-
.6902	-	3.441	-	.6032	-	-	1.840
.6914	-	-	3.635	.6042	-	-	1.868
.6921	-	-	3.579	.6062	-	1.789	-
.6932	-	3.445	-	.6080	2.066	-	-
.6947	3.582	-	-	.6090	2.062	-	-

The time of primary minimum was JD (hel.)
 $2,440,025.695 \pm 0.001$. The old ephemeris, $2,427,551.395 + 1.193595$, gives an O-C of $+0.0036$ and thus appears inadequate. The following new ephemeris, $2,440,025.6946 + 1.19359875$, gives satisfactorily small O-C's for all known times of minimum. The last digit in each constant is probably significant.

Table B

Piotrowski (Acta Astronomica <u>2</u> , 70)	$+0.0009 \pm ?$
Tsesevich (Odessa Izvestia, <u>4</u> , part 3, 66)	-0.0004 ± 0.001
Soloviev (Variable Stars <u>12</u> , 276)	$-0.0008 \pm ?$
Hall (this paper)	$+0.0004 \pm 0.001$

From the observations it can be seen that primary minimum is partial, 1.749 deep in V, 0.17 redder in B-V, and 0.06 redder in U-B.

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