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THE PERIOD OF AB ANDROMEDAE

Observations of AB And made by BAV-members in the years 1963 to 1966 show large positive $O-C_1$'s against L. BINNENDIJK's (AJ 64, 69.1959) elements

$$\text{Min I} = \text{JD 243 6109.57835} + 0^d.331\ 889\ 40 \cdot \text{E}. \qquad (1)$$

Table I: BAV-Minima of AB Andromedae

Min (JD 243...)	$O - C_1$	$O - C_2$	Observer
8983.436	+0.027	+0.003	W. Quester
8984.428	+0.024	-0.001	W. Braune
.429	+0.025	0.000	W. Eckert
.430	+0.026	+0.001	J. Dueball
9024.589	+0.026	+0.001	W. Braune
9026.580	+0.026	+0.001	" "
9056.442:	+0.018:	-0.008:	M. Seidl
9058.447	+0.031	+0.006	" "
9061.434:	+0.031:	+0.006:	" "
9063.421	+0.027	+0.002	" "
9391.324	+0.023	-0.005	" "
9403.435:	+0.020:	-0.008:	J. Hübscher
.445	+0.030	+0.002	W. Braune

Using these observations and those published by L. J. ROBINSON in IBVS 180 (observer M.BALDWIN) one obtains 2 normal minima:

$$\text{JD 243 9024.589} \qquad O - C_1 = +0^d.026$$
$$9391.328 \qquad\qquad +0.027.$$

In his work BINNENDIJK gives normal minima. These, together with some new ones, based mainly on BAV observations, are given in Table II. New elements, derived from the last 11 normal minima in Table II, are

$$\text{Min I} = \text{JD 243 6109.57928} + 0^d.331\ 892\ 15 \cdot \text{E} \qquad (2)$$
$$\underline{+}.00057 \quad \underline{+}.000\ 000\ 17$$

The residuals against these elements are given as O-C$_2$ in Tables I and II. From the latter it can be seen that these elements sufficiently represent the observations from 1954 (JD 243 5000) onwards. In Table II roman numbers behind each time of minimum denote primary or secondary minimum, the letters e, p, v stand for photoelectrical, photographical and visual observations respectively.

The variation of the period of AB And since 1900 can be followed by means of the O-C$_3$'s in Table II. They are calculated with elements by P. Th. OOSTERHOFF (BAN 11, 217 1950)

$$\text{Min I} = \text{JD } 242\ 5502.11989 + 0^{d}331\ 886\ 486 \cdot E. \qquad (3)$$

The graph shows these O-C$_3$'s plotted against time. The square represents BINNENDIJK's photoelectrical observations; it also encloses 2 visual minima.
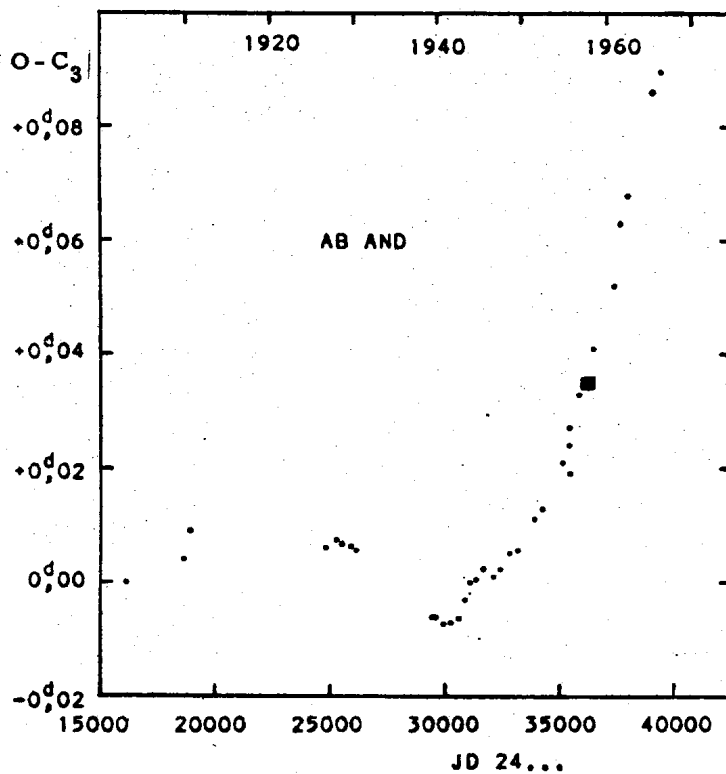
Table II: Normal Minima of AB Andromedae

Min (JD 24...)		$O - C_2$	$O - C_3$	References
16 103.925	II p		$+0\overset{d}{.}001$	BINNENDIJK, L.
18 684.512	I p		+0.004	"
18 963.633	I p		+0.009	"
24 760.360	I p		+0.006	"
25 276.4445	I p		+0.0074	"
25 502.1267	I p		+0.0068	"
25 873.5073	I p		+0.0064	"
26 216.1793	II p		+0.0056	"
29 523.583	I p		-0.006	"
29 550.6312	II p		-0.0060	"
29 907.7398	II p		-0.0072	"
30 257.8803	II p		-0.0070	"
30 611.8379	I p		-0.0063	"
30 962.645	I p		-0.003	"
31 046.615	I p		0.000	"
31 350.4580	II p		+0.0004	"
31 707.9018	I p		+0.0025	"
32 133.0469	II p		+0.0010	"
32 413.1603	II p		+0.0022	"
32 793.671	I p	$+0\overset{d}{.}026$	+0.005	"
33 207.3684	II p	+0.0200	+0.0059	"
33 886.578	I v	+0.012	+0.011	"
34 264.600	I v	+0.009	+0.013	"
35 075.407	I v	+0.004	+0.021	"
35 304.411	I v	+0.002	+0.024	RUDOLPH, R. AN 285, 162 (190)
35 370.460	I v	+0.005	+0.027	BINNENDIJK, loc. cit.
35 379.413	I v	-0.004	+0.019	RUDOLPH, loc. cit.
35 782.336	I v	+0.002	+0.033	BINNENDIJK, loc. cit.

Min (JD 24...)		$O - C_2$	$O - C_3$	References
36 069.421	I v	$+0.^d001$	$+0.^d035$	BINNENDIJK, loc. cit.
36 108.418	II v	0.000	+0.036	RUDOLPH, l.c.+ 1 min. EBC3 (1960)
36 109.57835	I e	-0.0009	+0.0345	BINNENDIJK, loc. cit.
36 124.68008	II e	-0.0003	+0.0354	"
36 132.64609	II e	+0.0003	+0.0361	"
36 459.559	II v	-0.001	+0.041	BRAUNE, W., QUESTER W. AN 286 209 (1963) + 2 minima EBC 3 (1960)
37 325.296	I v	-0.004	+0.052	DUEBALL, J., LEHMANN, P. B. AN 288, 168 (1965)
37 566.589	I v	+0.003	+0.063	" "
37 944.446	II v	+0.001	+0.068	" "
39 024.589	I v	+0.001	+0.086	- -
39 391.328	I v	-0.001	+0.090	- -

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