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THE PERIOD OF AQ TUCANAE

The eclipsing binary AQ Tucanae (BV 423) was observed by the author on six nights in September, 1969, with the number 1 16-inch telescope at the Cerro Tololo Inter-American Observatory. The observations were made in three colors with the use of standard UBV filters and a refrigerated 1P21 photoelectric photometer.

	<u>Minima</u>	<u>Epoch</u>	<u>O-C</u>
2438	257.502 (K&S)	-3732.5	-0.022
	263.490	-3722.5	+0.018
	297.364	-3665.5	-0.014
	309.322	-3645.5	+0.047
	314.322	-3637.0	-0.010
	314.367	-3637.0	+0.035
	339.293	-3595.0	-0.022
	641.497	-3087.0	+0.002
	695.294	-2996.5	-0.034
	695.340	-2996.5	+0.012
	701.258	-2986.5	-0.019
2440	477.7731 (C)	0.0	-0.0012
	477.7737	0.0	-0.0006
	477.7761	0.0	+0.0018
	478.6656	1.5	-0.0010
	478.6658	1.5	-0.0008
	478.6686	1.5	+0.0020
	480.7482	5.0	-0.0003
	480.7483	5.0	-0.0002
	483.7230	10.0	+0.0003
	483.7223	10.0	-0.0004
	483.7229	10.0	+0.0002
	485.8040	13.5	-0.0007
	485.8052	13.5	+0.0005

Koehler and Schoeffel published a list of minima in IBVS no.91 (1965) and obtained a period of 0^d59480 . After reducing the Cerro Tololo data a refined, compatible set of light elements was found to be:

$$\text{JD } 2440477.7743 + 0^d59484267$$

$\underline{+2}$	$\underline{+27}$
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The two minima of AQ Tucanae are nearly equal and about 0^m50 in V. The primary is about 0^m48 and the secondary is about 0^m45 in B. Because of this, identification of primary and secondary eclipses is a problem. The identities of primary and secondary of the observations of Koehler and Schoeffel (or the authors) had to be reversed in order to get a compatible set of light elements. The light curves are currently being analyzed.

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