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PRELIMINARY ELEMENTS FOR BV 1621 Cma = HD 56429

Markworth (IBVS No.921) found this variable and published two minima. Popper and Andersen (IBVS No. 1298) obtained spectrograms which shows that the star is a spectroscopic binary with a period of approximately $4^d.80$. From their uvby photometry they found the period close to $4^d.801$, a deep secondary minimum and a duration of the minima of $0^d.35$.

A new investigation of all available Bamberg-Sky-Survey plates shows the following minima:

E	Min. (J.D.) ₀	O - C	m _{pg}
0	2438814. ^d 276	+0. ^d 003	8.6
70	39150.384	+0.038	8.6
75	39174.291	-0.060	8.6
131.5	39445.539	-0.072	8.6
132.5	39450.516	+0.104	8.6
597.5	41683.038	+0.137	8.6
671.5	42038.048	-0.131	8.7

With this minima preliminary elements are established:

$$\text{Min.} = 2438814.^d.273 + 4.^d.801052 \cdot E.$$

In maximum-light, the star is constant at magnitude $8^m.1$ pg, it belongs to the Algol-class.

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ELEMENTS FOR BV 840 Cen, BV 1172 Cen, BV 1444 Ara,
V 449 Cen AND V 603 Cen

On plates of the Bamberg-Sky-Survey these five long-period variables were investigated using the Argelander-step method. The magnitudes of the comparison stars were determined with SA 153 and SA 177 (1). Using all maxima of Table 2, together with values of some ascending and descending branches, the elements of Table 1 were determined.

Table 1

	Type	E_0	P	Amplitude	N
BV 840 Cen	M	2438554 ^d	228 ^d	9 ^m .8 - 12 ^m .6	pg 126
BV 1172 Cen	M	38511	261	10.9 - (13.8)	70
BV 1444 Ara	M	39298	266	11.8 - (13.9)	109
V 449 Cen	SRb	39614	123	10.3 - 11.0	131
V 603 Cen	M	38898	253	11.1 - (13.4)	60

(N=Number of plates with positive observations)

Table 2

	E	O	Date (J.D.)	m_{pg}	O-C
BV 840 Cen	0	M	2438547 ^d :	10.3	+ 7 ^d
		m	38892	11.9	
	3	M	39238	10.2	± 0
		m	40731	12.6	
BV 1172 Cen	11	M	41062	10.7	± 0
	0	M	38521	11.5:	+10
	3	M	39295	11.5	+ 1
	7	M	40344	11.5:	+ 5
BV 1444 Ara		m	38945	13.6	
	0	M	39299	11.8	+ 1
		m	40028 :	13.7	
	4	M	40360	12.2	- 2
V 449 Cen	11	M	42225 :	12.1	+ 1
	0	M	39614	10.5	± 0
	3	M	39976	10.4	- 7
	9	M	40732	10.5	+11
V 603 Cen	12	M	41090 :	10.7:	± 0
	0	M	38898	11.2	± 0
	3	M	39657 :	11.1	± 0

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