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**PHOTOMETRIC LIGHT-CURVES OF SOUTHERN
 BV-STARS**

BV 421 = Cape -85° 55 (Fig. 1)

Comparison-stars:

Cape -85° 65 9^m.3
 Cape -85° 60 9^m.7

Magnitudes of comparison-stars have been derived by photometric connexion to stars (HD 94 009 G5; HD 89 499 G5) from the catalogue of COUSINS and STUY¹.

Min = JD 243 8315.787 + 1^d.14926 . E, EW, Ampl. 0^m.4

The photometric derivation of the light-curve proved BV 421 to be an eclipsing binary in contrary to its publication as RRc in Inf. Bull. on. Var. Stars, No. 54². The period given there had to be doubled.

Individual minima (fainter than 9^m.7)

Minima	E	O - C
JD 243 8316.323	0.5	- 0 ^d .039
8374.356	51	- 0.043
.401	51	+ 0.002
8408.324	80.5	+ 0.022
8427.279,	97	+ 0.014
8435.314	104	+ 0.004
8439.312	107.5	- 0.020
.356	107.5	+ 0.024
8440.449	108.5	- 0.033
8443.353	111	- 0.002
.398	111	+ 0.043

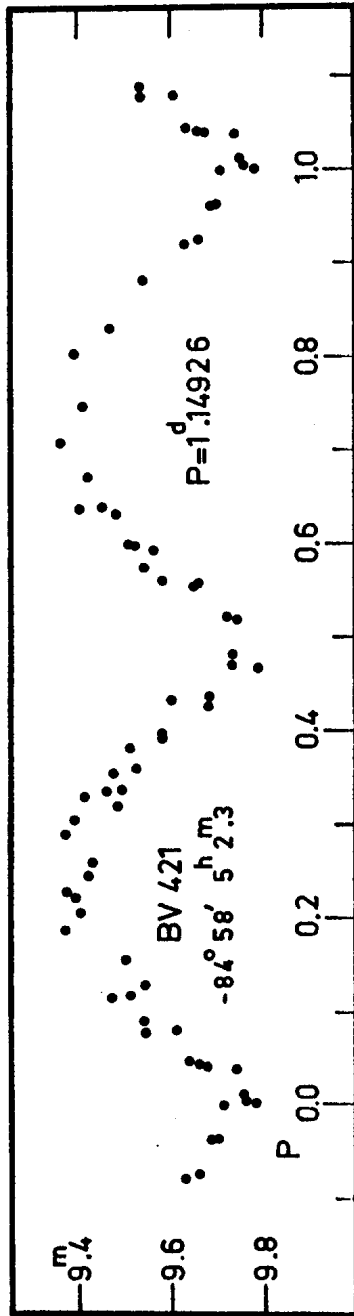


Fig.1

BV 423 = HD 1372 (F2) (Fig.2)

Comparison-stars:

HD 1024 (F5) $9^m.8$

HD 1446 (G0) $10^m.6$

Min = JD 243 8257.540 + $0^d.59480$. E,EW, RRc?, Ampl. $0^m.4$

The light-curve shows that BV 423 is probably an eclipsing binary of type EW, however, the possibility of BV 423 being an RRc-type pulsation variable can not be excluded. The period now derived is nearly twice the period given in Inf.Bull. on Var.Stars, No. 54². The light-curve shows more scattering than usually, since BV 423 is very near to the edge of the photographic plates used.

Individual minima (fainter than $10^m.85$)

Minima	E	O - C
JD 243 8257.502	0	- $0^d.043$
8263.490	10	- 0.002
8297.364	67	- 0.028
8309.322	87	+ 0.034
8314.322	95.5	- 0.011
.367	95.5	+ 0.024
8339.293	137.5	- 0.032
8641.497	645.5	+ 0.014
8695.294	736	- 0.019
340	736	+ 0.027
8701.258	746	- 0.003

BV 426 = HD 131 356 (G5) (Fig.3)

Comparison-stars:

HD 130 635 (A2) $8^m.45$ (mean values of Harvard and Cape catalogues)

HD 130 210 (A3) $9^m.2$

Max = JD 243 8207.0 + $36^d.9$. E, Cδ, Ampl. $0^m.4$

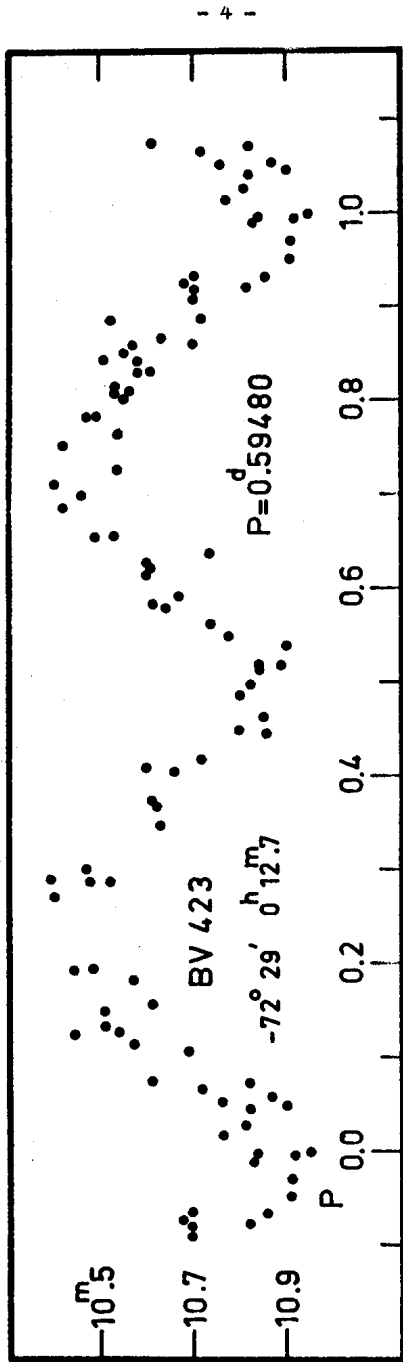


Fig. 2

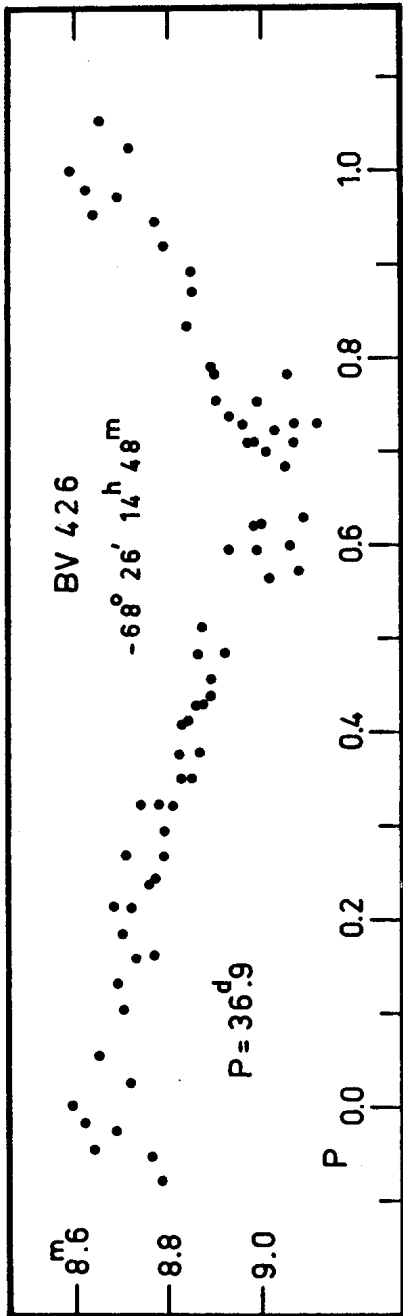


Fig.3

The period in Inf.Bull. on Var. Stars, No. 54², had to be shortened by one day.

Individual maxima (brighter than 8^m.75)

Maxima	E	O - C
JD 243 8205.284	0	- 1 ^d .716
6.277	0	- 0.723
8502.485	8	+ 0.035
3.485	8	+ 1.035

BV 429 = HD 136 483 (G0) (Fig.4)

Comparison-stars:

HD 136 146 (A5)	8 ^m .95
HD 135 815 (A2)	9 ^m .45

Magnitudes of comparison-stars have been derived by photometric connexion to stars (HD 131 099 A2; HD 134 288 F0) from the catalogue of COUSINS and STOY¹.

Max = JD 243 8197.3 + 16.73 . E. Cδ, Ampl. 0^m.4

The period, given in Inf.Bull. on Var. Stars, No. 55², had to be shortened by one day.

Individual maxima (brighter than 9^m.2)

Maxima	E	O - C
JD 243 8196.330	0	- 0 ^d .970
8498.495	18	+ 0.055
8548.331	21	- 0.299
8581.245	23	- 0.845
2.245	23	+ 0.155
3.247	23	+ 1.157

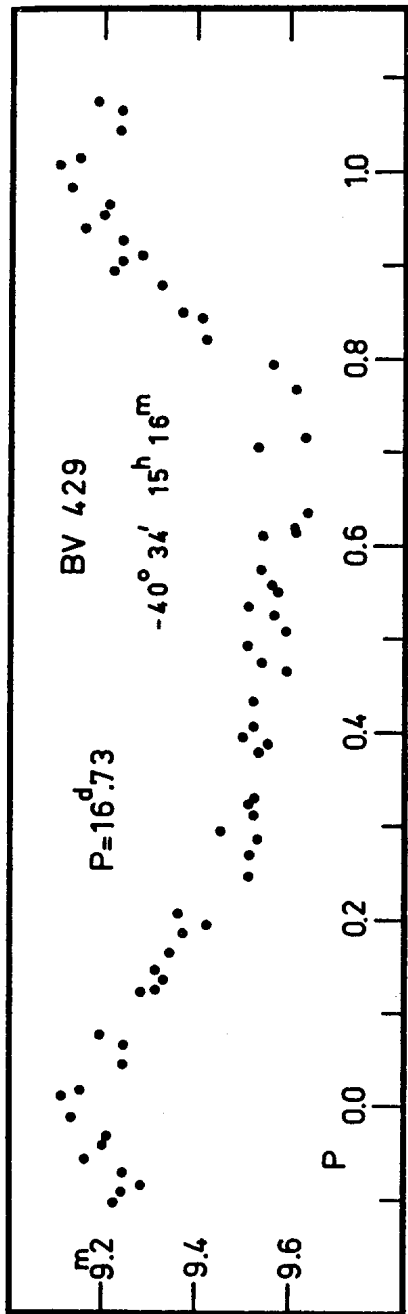


Fig.4

BV 523 = HD 130 233 (F8) (Fig.5)

Comparison-stars:

HD 130 042 (K0) 8^m.10
HD 129 496 (F8) 9^m.25

Magnitudes of comparison-stars have been derived by photometric connexion to stars (HD 123 151 K0; HD 125 833 K0) from the catalogue of COUSINS and STUY¹. Preliminary elements had been published in Inf. Bull. on Var. Stars, No 74².

Max = JD 243 8206.05 + 3^d.0651 . E, C6 , Ampl. 0^m.5

Individual maxima (brighter than 8^m.10)

Maxima	E	O - C
JD 243 8206.278	0	+ 0 ^d .228
8230.220	8	- 0.351
8475.556	88	- 0.223
8494.495	94	- 0.326
8500.488	96	+ 0.188
8549.335	112	- 0.006
8555.333	114	- 0.138
8561.336	116	- 0.266
8580.248	122	+ 0.256
8583.250	123	+ 0.193
8586.252	124	+ 0.130
8589.254	125	+ 0.068
8592.250	126	- 0.003
8604.210	130	- 0.303

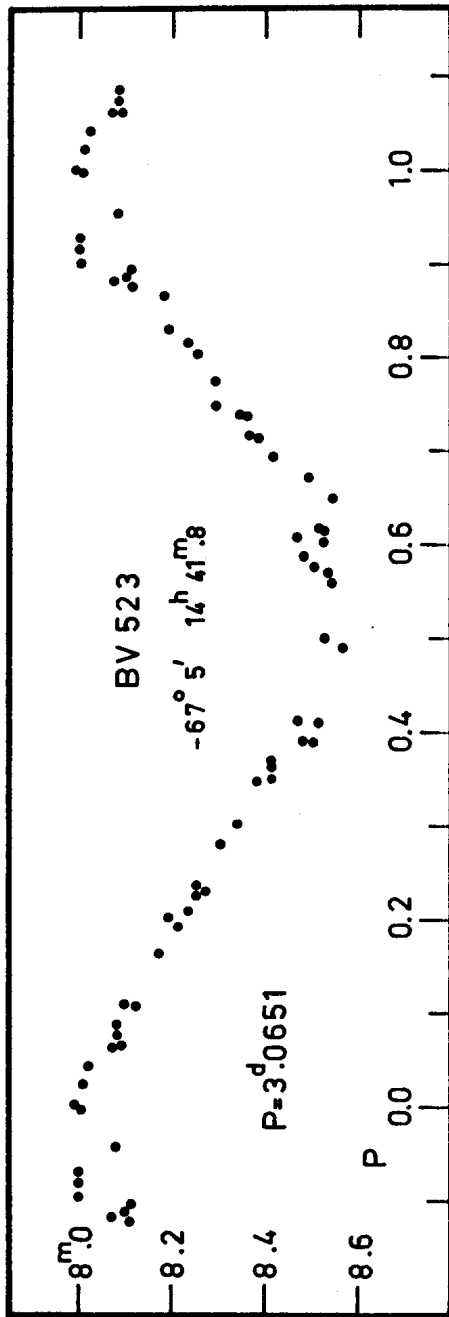


Fig.5

BV 601 = CoD -39° 14830 (Fig.6)

Comparison-stars:

CoD -40° 14 903 10^m.45
CoD -39° 14 831 10^m.77

Magnitudes of comparison-stars have been derived by photometric connexion to stars (HD 213 628 G0, HD 213 657 F5) from the catalogue of COUSINS and STOY¹.

Max = JD 243 8260.438 + 0^d.54741, E, RR, Ampl. 0^m.25

BV 601 has been published first without light-curve in Inf.Bull. on Var. Stars, No. 81². The period given there is wrong.

Individual maxima (brighter than 10^m.5)

Maxima	E	O - C
JD 243 8260.472	0	+ 0 ^d .034
8315.327	158	- 0.002
8338.246	224	- 0.012
8615.486	1022	+ 0.005
8692.296	1243	+ 0.027
8708.259	1289	+ 0.010

BV 612 = BD -21° 5657 (Fig.7)

Comparison-stars:

a = Cape -21° 7603 10^m.0
b = see figure 10^m.5 (estimated)

The elements of BV 612 have been communicated already in Inf. Bull. on Var. Stars, No. 86².

Min = JD 243 8252.290 + 6^d.03145, E, EA, Ampl. 0^m.7

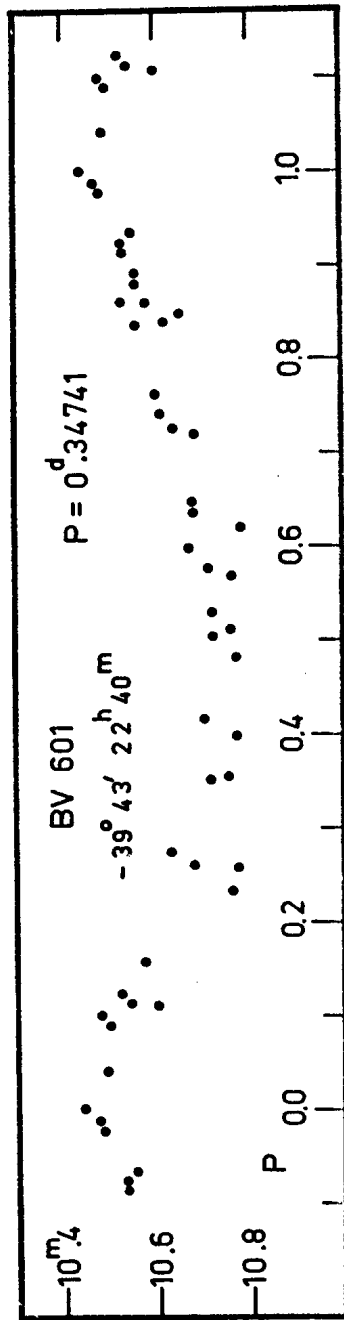


Fig.6

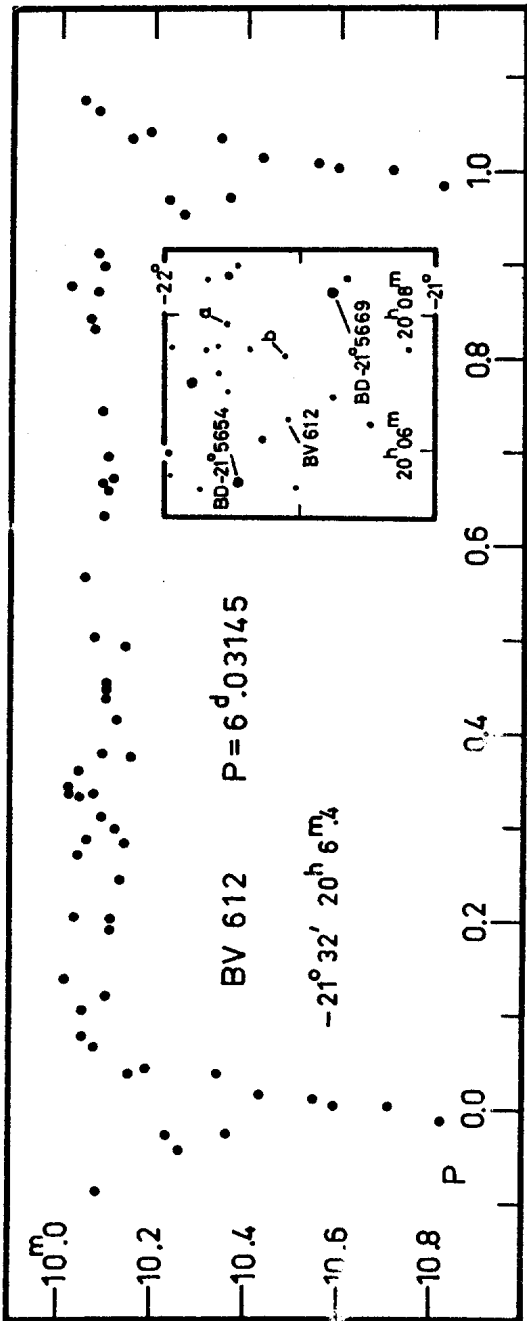


Fig. 7

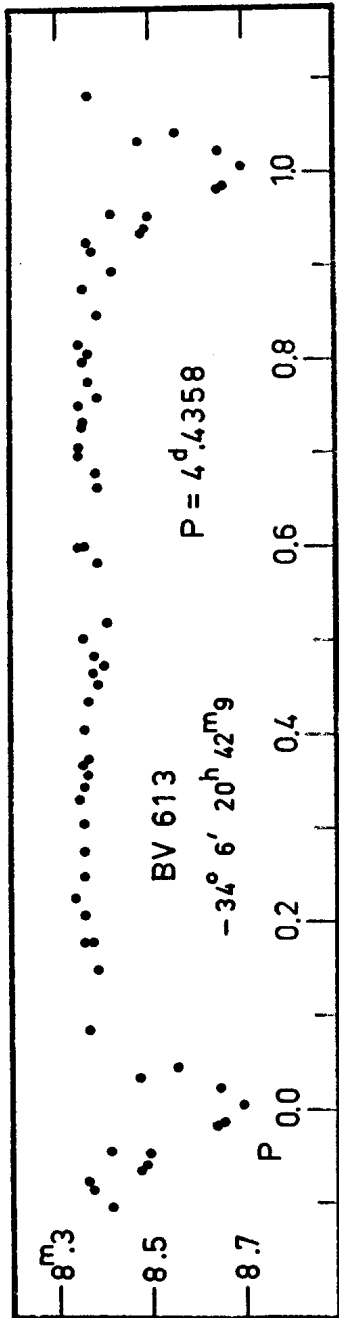


Fig. 8

Individual minima (fainter than $10^m.4$)

Minima	E	O - C
JD 243 8252.369	0	+ 0 ^d .079
8258.367	1	+ 0.045
8264.362	2	+ 0.009
8638.312	64	+ 0.006
8650.273	66	- 0.096

BV 613 = HD 198 103 (A3) (Fig.8)

Comparison-stars:

Cape -34 ^o 8793	8 ^m .2
Cape -34 ^o 8797	8 ^m .6

The elements of BV 613 have been communicated already in Inf. Bull. on Var. Stars, No. 86².

Min = JD 243 8295.265 + 4^d.4358 . E,EA, Ampl. 0^m.3

Individual minima (fainter than $8^m.6$)

Minima	E	O - C
JD 243 8295.270	0	+ 0 ^d .005
8583.522	65	- 0.070
8641.362	78	+ 0.105
8672.244	85	- 0.064

¹ Royal Observatory Bulletins, No.64, A.W.J. COUSINS and R.H.STOY, Photoelectric Magnitudes and Colours of Southern Stars.

² Publications of W. STROHMEIER, R. KNIGGE and H. OTT.

Bamberg, 14 April 1965

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