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 Astronomisches Institut der Universität Erlangen-Nürnberg  
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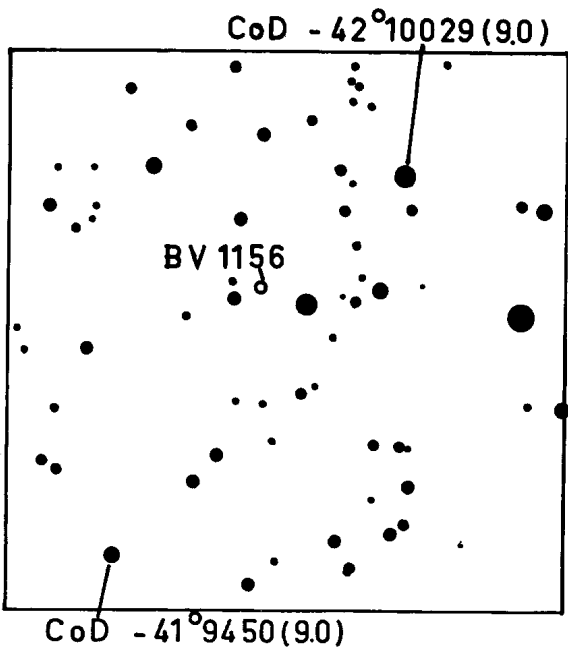
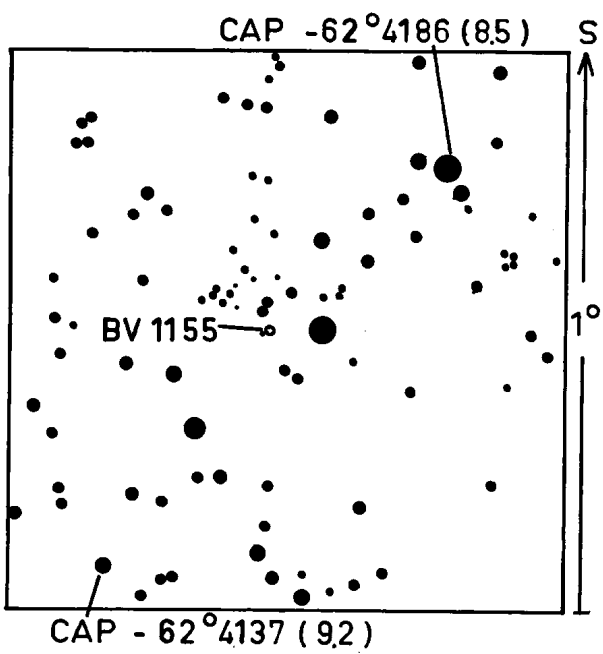
NEW BRIGHT SOUTHERN VARIABLE STARS

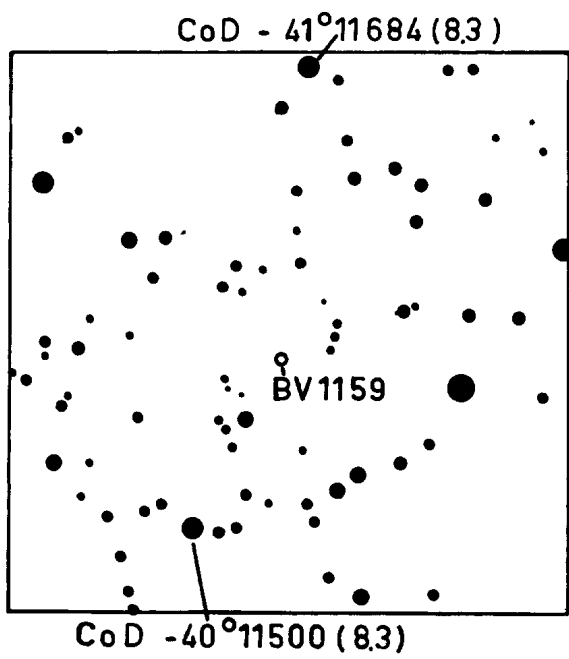
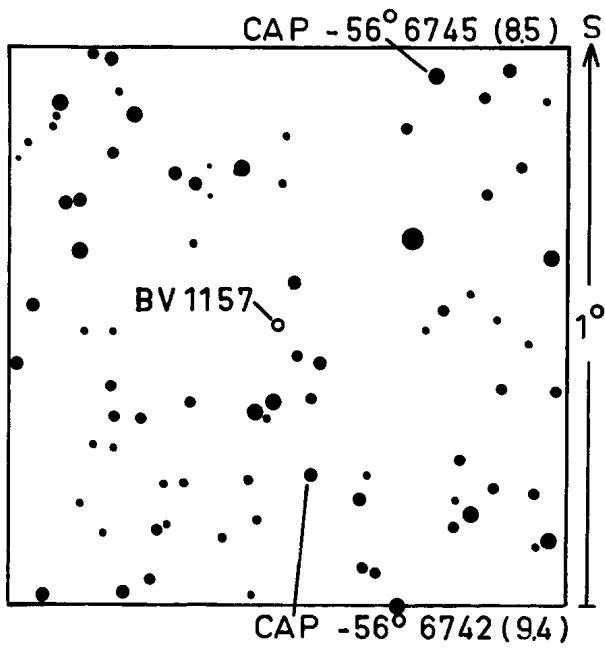
The plates, which have been taken in New Zealand at the Mt. John Observatory University, were exposed with the same cameras, lenses and treatment as formerly in South-Africa at the Boyden-Observatory. Through the efforts of Prof. WOOD, Flower and Cook Observatory (Philadelphia) a mounting and the funds for the payment of an observer from the National Science Foundation (USA) were obtained. I have to thank also to Mr. BATESON, Astronomer in Charge, and the observers Mr. PATTERSON (Mt. John) and Dipl. Phys. U. KÖHLER (Bamberg). The first shipment of plates (400) from the declination zones  $-77^\circ$ ,  $-64^\circ$ ,  $-51^\circ$  and  $-38^\circ$  at RA  $12^h-24^h$  led to the following discoveries.

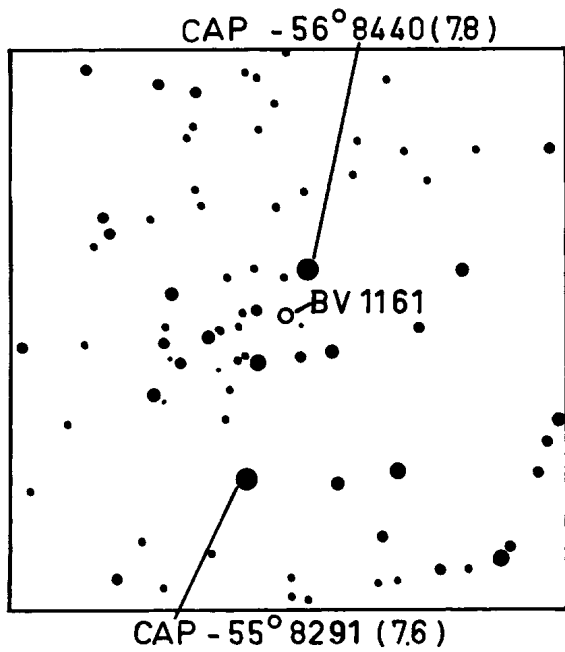
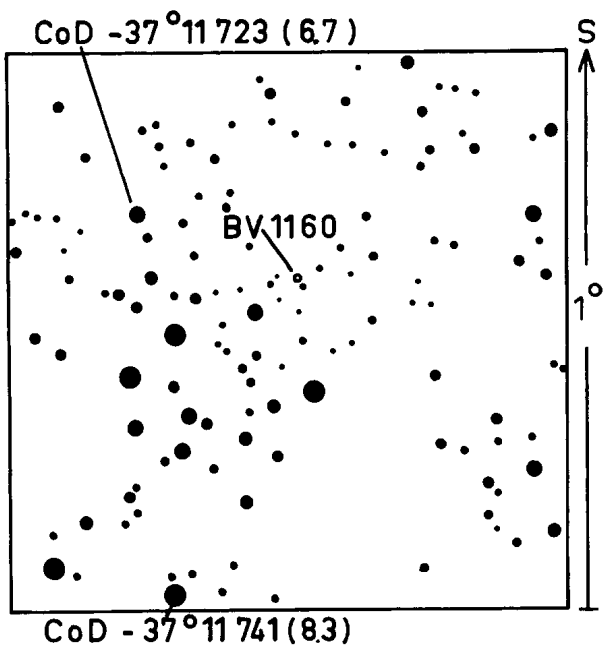
The brighter\* stars are listed with standard catalogue numbers; stars fainter than  $9^m.5$  are given with the surrounding star fields.

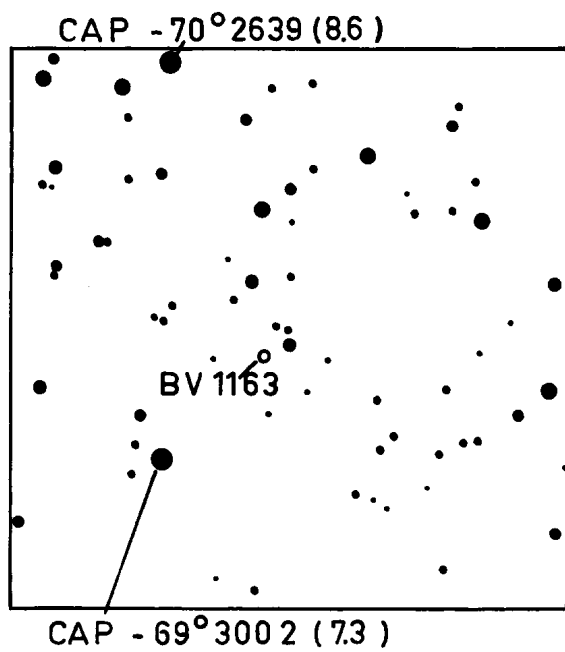
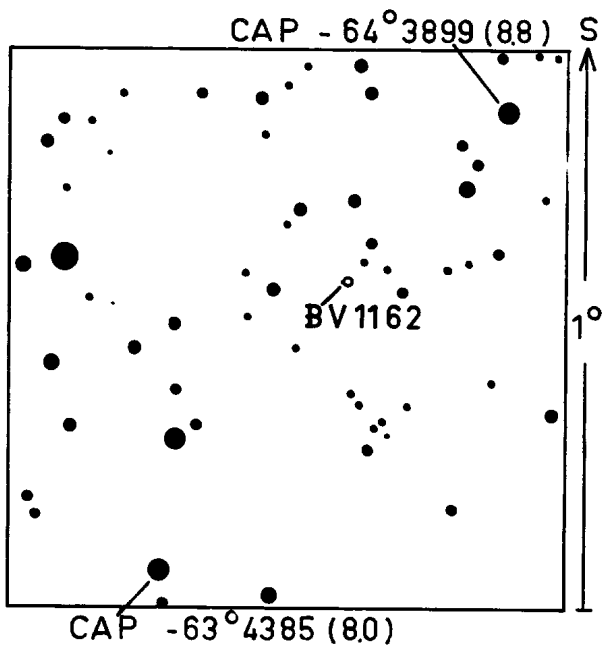
BV1153	Mus	= CAP-69°	1725(8 <sup>m</sup> .0)	= HD 111 953(K <sub>0</sub> )	A <sub>pg</sub> = 0 <sup>m</sup> .80
BV1154	Cen	= CAP-63°	2662(8.7)	= HD 115 034(B <sub>2</sub> )	A <sub>pg</sub> = 0.25
BV1155	Cen	= CAP-62°	4165(10.3)		A <sub>pg</sub> = 0.35
BV1156	Cen	= CoD-42°	9994(9.6)	= HD 133 473(F <sub>8</sub> )	A <sub>pg</sub> = 0.30
BV1157	Cir	= CAP-56°	6733(9.6)	= HD 136 591(G <sub>0</sub> )	A <sub>pg</sub> = 0.40
BV1158	Ara	= CAP-58°	6972(8.4)	= HD 153 387(B <sub>9</sub> )	A <sub>pg</sub> = 0.25
BV1159	Sco	= CoD-40°	11518(9.5)	= CSV 7657	A <sub>pg</sub> = 0.35
				= S 7642	pg
BV1160	Sco	= CoD-37°	11762(10 <sup>m</sup> )	= CAP -37°7357	
				(9 <sup>m</sup> .6)	A <sub>pg</sub> = 0.35
BV1161	Ara	= CAP-56°	8436(9.0)	= HD 161 160(A <sub>0</sub> )	A <sub>pg</sub> = 0.60
BV1162	Pav	= CAP-64°	3890(10.0)		A <sub>pg</sub> = 0.40
BV1163	Pav	= CAP-70°	2644(9.8)	= HD 182 468(Mb)	A <sub>pg</sub> = 0.50
BV1164	Ind	= CoD-48°	13724(9.9)	= HD 199 063(A <sub>0</sub> )	A <sub>pg</sub> = 0.45
BV1165	Gru	= CoD-44°	14487(10 <sup>m</sup> )	= CAP -44°10028	pg
				(10 <sup>m</sup> )	A <sub>pg</sub> = 0.20

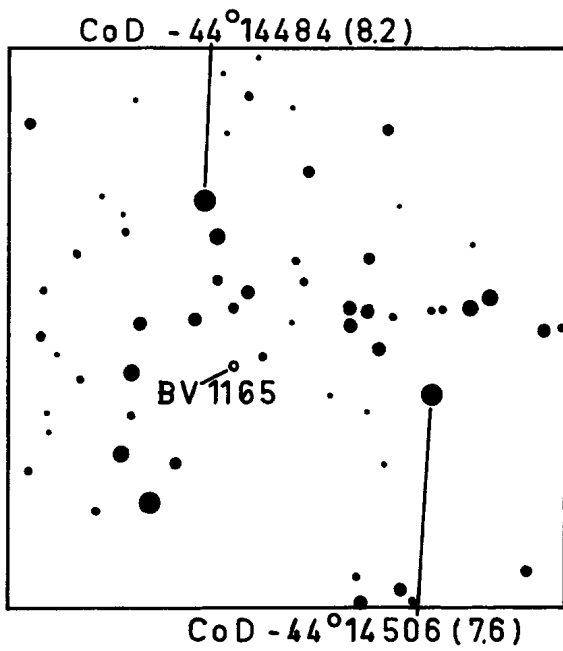
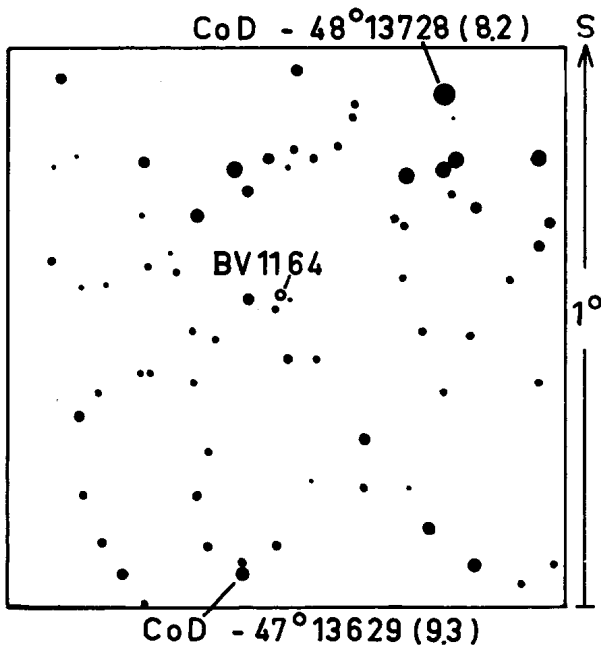
The elements for the following three eclipsing binaries have already been derived with the help of the Sonneberg plate material (Miss Gessner).











BV 1155 = CAP  $-62^{\circ}4165(10^m3)$

Min = JD 242 8664.450 +  $3^d.367$  895 . E

Minima	E	O-C	Minima	E	C
242...			243...		
8664.363(S)	0	-0.087	8933.261	3049	+0.099
8930.610(S)	79	+0.096	.308( $\frac{1}{2}$ )	3049	+0.146
243...			8943.241	3052	-0.025
4477.392(S)	1726	-0.045	9182.419	3123	+0.033
8549.286	2935	+0.064	.461	3123	+0.075
.331( $\frac{1}{2}$ )	2935	+0.109	9199.369( $\frac{1}{2}$ )	3128	+0.170
8586.249	2946	-0.020	.410( $\frac{1}{3}$ )	3128	+0.184
8879.403( $\frac{1}{2}$ )	3033	+0.127	9209.339	3131	+0.010
.449( $\frac{1}{2}$ )	3033	+0.173	.381	3131	+0.052
8906.308	3041	+0.089	9236.311( $\frac{3}{4}$ )	3169	-0.039
.355( $\frac{1}{2}$ )	3041	+0.136	9653.933(NZ)	3263	+0.042
8916.299	3044	-0.023	9680.830	3271	-0.004
.345	3044	+0.023			

S = Sonneberg plates, NZ = New Zealand plates

Ampl.  $0^m.50$ , without secondary minimum, EA

BV 1161 = CAP  $-56^{\circ}8436(9^m0)$  = HD 161 160(A<sub>0</sub>)

Min = JD 242 8686.375 +  $3^d.109$  915 . E

Minima	E	O-C	Minima	E	O-C
242...			8585.336( $\frac{1}{2}$ )	3183	+0.102
8686.429(S,=)	0	+0.054	.381( $\frac{1}{3}$ )	3183	+0.147
8689.459(S,+)	1	-0.026	8610.254( $\frac{1}{2}$ )	3191	+0.140
8745.362(S)	19	-0.101	8613.254	3192	+0.030
8773.336(S,-)	28	-0.117	.299( $\frac{1}{2}$ )	3192	+0.075
243...			8616.258( $\frac{1}{2}$ )	3193	-0.076
4520.586(S)	1876	+0.010	8641.222	3201	-0.009
4542.337(S,+)	1883	-0.008	8877.538	3277	-0.028
4548.601(S,-)	1885	+0.036	9269.451	3403	+0.035
4570.345(S,+)	1892	+0.011	.496( $\frac{1}{2}$ )	3403	+0.080
4573.392(S,-)	1893	-0.052	9294.388( $\frac{1}{2}$ )	3411	+0.093
8196.388( $\frac{1}{2}$ )	3058	-0.107	9300.410( $\frac{1}{2}$ )	3413	-0.105
.445	3058	-0.050	9614.504( $\frac{1}{3}$ )	3514	-0.112
8199.449( $\frac{1}{3}$ )	3059	-0.156	.546( $\frac{1}{2}$ )	3514	-0.070
8224.362( $\frac{1}{2}$ )	3067	-0.122	9679.927(NZ)	3535	+0.003
8560.419( $\frac{1}{2}$ )	3175	+0.064	9682.938(NZ, $\frac{1}{3}$ )	3536	-0.096
			.990(NZ, $\frac{3}{4}$ )	3536	-0.044

S = Sonneberger plates NZ = New Zealand plates

Ampl.  $0^m.80$ , without secondary minimum, EA

BV 1162 = CAP  $-64^{\circ}3890(10^m.0)$

Min = JD 242 8332.225 + 5<sup>d</sup>.730 675 . E

Minima	E	O-C	Minima	E	O-C
242...					
8332.460(S,=)	0	+0.235	8561.406	1785	-0.074
8366.403(S,-)	6	-0.206	8584.381	1789	-0.021
.429(S,-)	6	-0.180	.426	1789	+0.024
8372.394(S)	7	+0.054	8590.340( $\frac{1}{2}$ )	1790	+0.207
.423(S,+)	7	+0.083	.385( $\frac{1}{3}$ )	1790	+0.252
8389.321(S,-)	10	-0.211	8607.299	1793	-0.026
.352(S)	10	-0.180	.344	1793	+0.019
8395.328(S,+)	11	-0.066	8613.299( $\frac{1}{2}$ )	1794	+0.243
.351(S,+)	11	-0.089	.344( $\frac{1}{3}$ )	1794	+0.288
8418.306(S,+)	15	+0.121	8636.264( $\frac{1}{2}$ )	1798	+0.285
8673.611(S,=)	59.5	+0.411	9289.447( $\frac{3}{4}$ )	1912	+0.171
8716.378(S,+)	67	+0.198	9358.237( $\frac{1}{2}$ )	1924	+0.193
8773.336(S,+)	77	-0.151	.281( $\frac{1}{2}$ )	1924	+0.237
243...			9375.240	1927	+0.004
4561.402(S)	1087	-0.067	9656.044(NZ)	1976	+0.005
8266.315( $\frac{1}{2}$ )	1733.5	-0.035	.094(NZ)	1976	+0.055
			9679.042(NZ)	1980	+0.080

S = Sonneberger plates      NZ = New Zealand plates

Ampl.  $0^m.55$ , with remarkable secondary minimum, EA

Bamberg, Juni 1968

W. STROHMEIER