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LONG PERIOD VARIABLE STARS
WITH LARGE INTRINSIC POLARIZATION

The polarimetric observations of long period variable stars made by the writer until the beginning of March 1966 were published recently (Ap. J. , 144, 857, 1966). In the accompanying table some new observations are listed which were made with the 21-inch telescope of the Lowell Observatory using Polaroid J-filter as an analyser. In this table P and θ denote the percentage polarization and position angle of the plane of vibrations in the equatorial coordinates, respectively; the superscripts V and B denote the yellow and blue filters of the UBV photometric system.

The stars V Canum Venaticorum and Z Ursae Majoris, both having periods slightly shorter than 200^d, reached the maximum polarization when they were at minimum brightness. The variables RS Cancrī, R Leonis, and U Herculis were least polarized at maximum brightness. The full list of the polarimetric observations of red variable stars made in the present programme will be published in a Lowell Observatory Bulletin.

HD	Star	Spectral Type	Period	Date 1966 (U. T.)	V	Percentage Polarization		Position Angle	
						P ^V	P ^B	θ^V	θ^B
41698	S Lep	M6	90 ^d	Mar. 21	7.1	1.8	2.6:	51 ^o	56 ^o
44639	V Mon	M5e-M8e	335	Feb. 23	9.4	0.9	1.8	27	11
				Mar. 22	7.9	1.0	2.0	9	12
78712	RS Cnc	M6 Ib - II(S) and	120 1700	Mar. 16	5.9	0.5	0.8	53	58
				Mar. 17	5.9	0.5	0.5	54	62
				Apr. 14	5.5	0.1	0.2	50	33
				Apr. 25	5.5	0.2	0.3	12	175
84748	R Leo	M7e-M8e	313	Mar. 17	6.1	0.5	0.4	16	43
92763	R UMa	M3e-M6e	302	May 23	7.0	0.8	0.8	48	51
				June 17	7.1	0.4	0.5	42	34
103681	Z UMa	M5 IIIe	198	Mar. 22	7.7	0.9	1.1	8	3
				Mar. 29	7.8	0.8	1.0	10	10
				Apr. 13	8.2	1.0	1.4	38	42
				Apr. 25	8.5	1.3	2.4	54	47
				May 16	9.1	1.4	2.6	41	41
				June 14	8.4	0.2	0.4	56	4
108105	SS Vir	Vir Ne (C6 e)	355	Apr. 11	6.6	0.1	0.8	176	14
				May 15	7.4	0.3	0.9	167	3
				June 14	7.2	0.1	0.9	5	7
115898	V CVn	M4e-M6e	192	Mar. 15	8.2	5.4	7.2	102	100
				Mar. 17	8.2	5.4	7.1	101	98
				Mar. 29	8.0	5.1	6.4	103	99
				Apr. 9	7.8	4.7	5.5	104	102
				Apr. 11	7.8	4.5	5.4	103	103
				Apr. 17	7.8	4.2	4.7	105	103
				Apr. 26	7.6	3.3	3.8	102	101
				May 15	7.5	3.1	3.3	104	103
June 13	6.8	2.3	2.7	103	109				

HD	Star	Spectral Type	Period	Date 1966 (U. T.)	V	Percentage Polarization		Position Angle	
						P ^V	P ^B	⊙ ^V	⊙ ^B
120499 R CV n ⁺		M6e-M8e	328	May 16	8.9	0.9	1.5	27	23
				June 13	7.7	1.0	1.5	22	30
136753 S CrB		M6e-M8e	361	Mar. 18	6.1	1.0	1.4	163	167
				Mar. 29	6.2	0.8	1.4	161	163
				Apr. 11	6.4	0.6	1.2	157	159
				Apr. 17	6.7	0.6	1.1	154	162
				May 16	7.7	0.6	1.4	152	159
			June 17	8.8	0.4	1.3	143	152	
141826 V CrB		N2 (C6 ₂)e	358	Mar. 18	8.6	2.0	2.2	147	142
				Apr. 14	8.9	1.8	1.8	148	160
144205 X Her		M6e	95 and 746	Apr. 18	6.7	1.2	1.6	59	57
				May 22	6.4	0.7	0.8	60	54
				June 14	6.4	0.0	0.3	73;	179
148206 U Her		M7e-M8e	406	Apr. 24	9.1	1.7	4.5	155	148
				Apr. 25	9.0	1.6	4.2	149	154
				May 15	8.5	0.6	1.1	125	165
				May 23	8.5	0.3	0.2	132	153
				June 14	8.9	0.7	1.9	68	52
186686 RT Cyg		M2e-M4e	190	Mar. 29	8.6	...	0.3	...	47
				Apr. 16	7.6	0.2	0.2	163	22
				Apr. 25	7.0	0.1	0.4	47	34
				May 15	7.0	0.1	0.2	43	56
				June 17	8.3	0.2	...	155	...
187796 χ Cyg		S7e-S10e	407	May 15	6.2	1.6	2.1	88	82
				May 23	6.4	1.5	1.9	91	84
				June 17	7.2	1.2	1.2	92	79

+/ Appreciable polarization of R CVn was first noticed by T. Gehrels in April 1966.

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