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British Astronomical Association

VARIABLE STAR SECTION

CIRCULAR 8

Deurne, Antwerp, 1925 March 15.
26, rue Herry.

WORKING LIST 1925. — A Working List of the 52 objects forming the regular Programme of the Variable Star Section in 1922 was published in *Circular* 1, pp. 1 and 2, (2). During the last three years, seven fresh stars have been taken up by the Section, and the wish has been expressed by some Members that an up to date Working List should be issued, together with some details on the Variables under observation. The present Circular is issued with this object in view.

The Table on pages 26 and 27 gives, in the order of Right Ascension for 1925·0, the following data regarding the 59 stars at present constituting the regular Programme of the Section : —

Column 1. — A current Number.

Col. 2. — Name of Variable according to the Argelander-Hartwig system of nomenclature.

Columns 3 and 4. — Right Ascension to the nearest second, and Declination to the nearest tenth of a minute of arc, reduced to 1925.0 from Müller & Hartwig's » Geschichte ».

Col. 5 and 6. — *Mean* magnitude at Maximum and at Minimum.

Col. 7. — Mean Period deduced from the Maxima, to the nearest day.

Col. 8. — Mean interval, in days, from Minimum to the following Maximum, i.e., length of the ascending branch of the Light Curve. When Period and *M—m* are not given, the star is not a Long Period Variable.

The data in Columns 5 to 8 are, in most cases, the results of our own observations, and more generally of those made in 1900-1919, taken from Appendices to *Memoirs B.A.A.*, Vols XV and XVIII ; and XXII and XXV. For stars recently added to our List, the data have been weighted from our observations and from other sources, more particularly from the work of the Rousdon observers.

Col. 9. — The year when the regular V.S.S. observations began. In a few cases (57 **SS CYGNI** ; 19 **U GEMINORUM**), some observations were made previous to the year given, but they are sparse and do not completely define the variation.

Col. 10 shows the number of the Report of the Variable Star Section in which our original observations have been printed, viz : Report **6** = 1899-1904, *Memoirs B.A.A.*, Vol. XV, 1906 ; **7** = 1905-1909, Vol. XVIII, 1912 ; **8** = 1910-1914, Vol. XXII, 1918 ; **9** = 1915-1919, Vol. XXV, 1924.

Col. 11 shows the B.A.A. publication in which continuous Light Curves from the V.S.S. observations have been published, viz : **A** = 1899-1904, *Memoirs B.A.A.*, Vol. XV, 1906 ; **B** = 1900-1909, Appendix to Vols XV and XVIII, 1913 ; **C** = 1910-1919, Appendix to Vols. XXII and XXV, 1924.

A continuous curve of 57 **SS CYGNI** since 1908 has appeared in the annual Reports on this star, in the Journal.

N° (1)	Star (2)	R.A. 1925·0 (3)	Dec. 1925·0 (4)	Max. (5)	Min. (6)	P (7)	M-m (8)	Since (9)	Reports (10)	Curves (11)
		h m s	o ′	m	m	d	d			
1	T Cassiopeiæ	0 19 10	+55 22·6	7·6	11·7	443	247	1920	—	—
2	R Andromedæ	20 4	+38 9·7	6·7	14·0	407	155	1900	6,7,8,9	A,B,C
3	W Cassiopeiæ	50 25	+58 9·6	8·5	12·1	404	219	1919	—	—
4	S „	1 14 7	+72 13·1	8·3	14·5	610	260	1923	—	—
5	R Arietis	2 11 51	+24 42·5	8·3	13·3	187	91	1900	6,7,8,9	A,B,C
6	W Andromedæ	12 48	+43 57·5	7·6	13·7	400	158	1911	8,9	C
7	o (Mira) Ceti	15 34	— 3 18·9	3·4	9·2	332	110	1899	6,7,8,9	A,B,C
8	S Persei	17 28	+58 14·8	8·1	10·2	—	—	1924	—	—
9	R „	3 25 16	+35 24·9	8·6	13·5	210	100	1922	—	—
10	X Camelo	4 35 59	+74 57·6	8·0	12·7	142	68	1914	9	C
11	V Tauri	47 42	+17 24·9	9·4	13.4	170	85	1919	—	—
12	R Aurigæ	5 11 14	+53 30·2	8·1	13.1	453	239	1901	6,7,8,9	A,B,C
13	U Orionis	51 22	+20 9·8	6·1	11·4	370	156	1900	6,7,8,9	A,B,C
14	V Camelo	52 40	+74 30·3	9·7	<15	518	—	1914	9	C
15	X Aurigæ	6 6 22	+50 14·6	8·4	13·0	165	80	1910	8,9	C
16	SS „	7 42	+47 45·6	11·0	15·3	—	—	1922	—	—
17	R Lyncis	55 7	+55 26·1	7.5	13·3	379	179	1920	—	—
18	R Geminorum	7 2 51	+22 49·2	7·0	12·9	370	148	1907	8,9	C
19	U „	50 39	+22 12·1	9·4	14·0	—	—	1908	—	—
20	R Leonis	9 43 32	+11 46·6	5·9	10.1	315	137	1900	6,7,8,9	A,B,C
21	R Ursæ Majoris	10 39 23	+69 10·2	7·6	13·1	300	114	1900	6,7,8,9	A,B,C
22	T „	12 32 59	+59 54·0	7·8	12·8	256	105	1900	6,7,8,9	A,B,C
23	S „	40 40	+61 30·2	7·9	11·5	223	111	1900	6,7,8,9	A,B,C
24	R Hydræ	13 25 37	—22 53·7	4.5	9.5	405	198	1903	6, 8,9	A, C
25	S Virginis	29 5	— 6 48·6	6·9	12·1	373	180	1900	6, 8,9	A, C
26	S Boötis	14 20 22	+54 9·1	8·3	13·0	270	131	1921	—	—
27	R Camelo	23 5	+84 10·3	8·2	13.5	270	134	1920	—	—
28	V Boötis	26 44	+39 11·6	7·5	10.6	264	115	1911	8,9	C
29	R „	33 53	+27 3·7	7.2	12·2	224	103	1901	6,7,8,9	A,B,C
30	U „	50 52	+17 59·9	10·0	12·3	178	89	1918	—	—

Since added

X Leonis	9 47 00	+12 13·6	12·0	15·1	—	—	1926	
T Piscium	0 28 07	+14 11·2	9·3	12·3	—	—	1927	
V Ursae Majoris	9 2 58	+51 25·0	9·6	11·2	—	—	1927	

N° (1)	Star (2)	R.A. 1925·0 (3)	Dec. 1925·0 (4)	Max. (5)	Min. (6)	P (7)	M-m (8)	Since (9)	Reports (10)	Curves (11)
		h m s	o ′	m	m	d	d			
31	S Coronæ	15 18 20	+31 38·1	7·1	12·8	362	127	1901	6,7,8,9	A,B,C
32	S Ursæ Minoris	32 25	+78 53·2	8·3	11·7	321	163	1911	8,9	C
33	R Coronæ	45 29	+28 23·0	5·9	13	—	—	1900	6	A
34	R Serpentis	47 14	+15 21·7	6·9	13·2	359	143	1900	6,7,8,9	A,B,C
35	W Coronæ	16 12 44	+37 58·9	8·4	13·1	238	106	1914	9	C
36	U Herculis	22 28	+19 3·7	7·4	12·0	406	175	1921	—	—
37	R Ursæ Minoris	30 59	+72 26 2	8·6	10·5	—	—	1924	—	—
38	R Draconis	32 27	+66 54·7	7·7	12·4	246	106	1900	6,7,8,9	A,B,C
39	S Herculis	48 29	+15 4·1	7·5	12·2	303	153	1900	6,7,8,9	A,B,C
40	T Draconis	17 55 15	+58 13·4	8·8	11·3	426	182	1923	—	—
41	T Herculis	18 6 16	+31 0·5	7·8	13·0	165	79	1900	6,7,8,9	A,B,C
42	W Lyræ	12 20	+36 38·8	7·8	12·4	196	95	1914	9	C
43	RY Ophiuchi	12 53	+ 3 40·0	8·0	12·9	152	71	1913	9	C
44	R Scuti	43 29	— 5 47·2	5·2	7·0	—	—	1900	6	A
45	R Aquilæ	19 2 45	+ 8 7·0	6·2	11·5	317	133	1900	6,7,8,9	A,B,C
46	R Cygni	34 48	+50 1·8	7·5	13·8	422	149	1901	6,7,8,9	A,B,C
47	Z „	47 41	+32 43·5	5·0	13·2	406	170	1900	6,7,8,9	A,B,C
48	S „	20 3 56	+57 46·2	10·0	14·9	324	160	1923	—	—
49	S Aquilæ	8 10	+15 23·9	9·0	11·5	147	74	1921	—	—
50	U Cygni	17 17	+47 39·5	7·2	10·9	461	221	1909	—	—
51	V Cygni	38 54	+47 52·4	8·3	13	418	187	1919	—	—
52	R Vulpeculæ	21 1 3	+23 31·5	8·0	12·6	136	67	1911	8,9	C
53	T Cephei	8 33	+68 11·0	6·1	10·1	385	200	1900	6,7,8,9	A,B,C
54	X Pegasi	17 26	+14 7·8	9·3	13·2	204	103	1914	9	C
55	W Cygni	33 11	+45 2·4	5·5	6·7	130	61	1900	6 9	A
56	S Cephei	36 11	+78 17·2	8·3	11·8	486	267	1923	—	—
57	SS Cygni	39 45	+43 14·5	8·5	11·6	—	—	1906	—	—
58	R Pegasi	23 2 53	+10 8·2	7·7	12·7	377	172	1900	6,7,8,9	A,B,C
59	R Cassiopeiæ	54 35	+50 58·2	7·0	12·8	429	179	1901	6,7,8,9	A,B,C

ALPHABETICAL LISTS.

In the following Lists, the stars are arranged in groups, each of which is dealt with in a separate Annual Report, and are placed in alphabetical order. The numbers refer to Column 1 in the Table : —

A. — 57 SS Cygni.

B. — 21 Long Periods, P < 300 days : —

* 49 S Aquilæ	27 R Camelo	* 43 RY Ophiuchi
* 5 R Arietis	* 10 X "	54 X Pegasi
* 15 X Aurigæ	35 W Coronæ	9 R Persei
29 R Boötis	* 55 W Cygni	* 11 V Tauri
26 S "	38 R Draconis	23 S Ursæ Majoris
* 30 U "	* 41 T Herculis	22 T "
28 V "	* 42 W Lyræ	* 52 R Vulpeculæ

The stars marked * have periods under 200 days, and should be observed, if possible, at least twice a week.

C. — 31 Long Periods, P >300 days : —

2 R Andromedæ	7 o (Mira) Ceti	39 S Herculis
6 W "	31 S Coronæ	36 U "
45 R Aquilæ	47 χ Cygni	24 R Hydræ
12 R Aurigæ	46 R Cygni	20 R Leonis
14 V Camelo	48 S "	17 R Lyncis
59 R Cassiopeiæ	50 U "	13 U Orionis
4 S "	51 V "	58 R Pegasi
1 T "	40 T Draconis	34 R Serpentis
3 W "	18 R Geminorum	21 R Ursæ Majoris
56 S Cephei		32 S Ursæ Minoris
53 T "		25 S Virginis

D. — 6 " Irregulars " : —

16 SS Aurigæ	19 U Geminorum	44 R Scuti
33 R Coronæ	8 S Persei	37 R Ursæ Minoris

E. — Novæ (not included in the " regular " Programme), N Aquilæ 1918·4, and N Cygni 1920·6 being observed at present.

BINOCULAR STARS.

All the stars on our List are visible in a good 3-in refractor when near maximum. The following may usually be observed during the whole of their variation with such an instrument : —

45 R Aquilæ	7 o (Mira) Ceti	20 R Leonis
49 S "	50 U Cygni	13 U Orionis
28 V Boötis	57 SS "	8 S Persei
1 T Cassiopeiæ	24 R Hydræ	23 S Ursæ Majoris
53 T Cephei		37 R Ursæ Minoris

The following may be usefully observed with binoculars or field glasses when near maximum : —

23 T Cephei	33 R Coronæ	20 R Leonis
7 o (Mira) Ceti	47 χ Cygni	13 U Orionis
	24 R Hydræ	

55 W Cygni, and 44 R Scuti are always visible with good field glasses when the Moon does not interfere.

FELIX DE ROY
Director.