Stars with peculiar spectra, discovered at the Astronomical Observatory of Harvard College.

The following list is a continuation of that which appeared in Vol. XCIX, column 375, of the Astronomische Nachrichten. The columns of the list contain successively a number for reference (beginning with 40, as the previous list contained 39 objects), the designations of the stars observed, their places for 1880, the general character of the spectra, and additional remarks. The stars selected for observation were mostly those described as red or colored in the Uranometria Argentina, to which, as in the previous list, reference is made by the letters U.A. The abbreviation Bm. is used to denote Birmingham's catalogue of red stars (Transactions of the Royal Irish Academy, Vol. XXVI, p. 249).

The star numbered 59 in the present list attracted attention on the evening of September 13, 1881, and the bands in its spectrum at once suggested that it might be a variable star of long period. Its magnitude was then about 8.9, and a few days later became 8.6. This appears to be about the maximum of its brightness. It is not contained in the Durchmusterung, although many fainter stars in the vicinity are included in that catalogue.

No.	Designation	R.A. 1880	Decl. 1880	Spectrum	Remarks
40	Bm. 82	$4^h 37^m 28^s$	$+ 32^0 41' 9$	Type III?	
41	π Puppis	7 12 55	— 36 53.0	Bands?	
42	U.A., Can. Maj., 159	7 16 8	— 25 40.0	Bands?	
43	Bm. 174	7 16 23	— 20 40.1	Bands.	
44	U.A., Can. Maj., 162	7 18 39	— 27 36.2	Bands?	Found by O. C. Wendell.
45	Star magn. 10	7 36 24	— 31 24.0	Bands?	*sf* U.A., Puppis, 148.
46	« 9	7 36 40	— 31 18.0	Bands?	*nf* »
47	U.A., Puppis, 175	7 40 59	— 37 40.6	Bands?	
48		8 45	— 28	Bands?	Near Bm. 206.
49	U.A., Hydra, 76	8 48 52	— 10 55.3	Type III?	*sp* U.A., Hydra, 78.
50	» 286	11 26 26	— 26 5.2	Bands.	Bands faint.
51	» 287	11 26 59	— 30 25.5	Bands.	»
52	Bm. 280	12 23 10	+ 28 57.5	Bands.	
53	U.A., Hydra, 358	13 42 16	— 27 46.0	Type III?	Bands strong; * very red.
54	U.A., Centaurus, 274	13 42 30	— 33 51.0	Peculiar.	Found by O. C. Wendell.
55	» 371	14 36 19	— 34 39.3	Bands.	»
56	σ Librae	14 57 3	— 24 48.5	Bands.	»
57	U.A., Lupus, 110	15 26 6	— 39 39.6	Bands?	
58	U.A., Scorpius, 25	16 0 48	— 26 0.2	Type III?	Bands faint.
59		16 32 0	+ 72 36	Bands.	Variable. 59/18 R Herculis
60	U.A., Oph., 66	16 52 37	— 24 54.5	Type III.	Found by O. C. Wendell.
61	Bm. 450	17 22 39	— 19 22.5	Type IV?	»
62	T Herculis	18 4 34	+ 31 0.1	Bands.	Spectrum like other var.
63	η Sagittarii	18 9 30	— 36 47.7	Type III.	
64	U.A., Oph., 206	18 10 4	+ 2 20.3	Type III.	
65	U.A., Sag., 56	18 14 8	— 24 58.0	Bands.	
66	R Scuti	18 41 5	— 5 49.9	Type III?	
67	Red star	19 12 17	— 16 7.5	Type IV.	*np* υ Sagittarii.
68	U.A., Sag., 198	19 24 50	— 31 7.2	Type III?	Bands distinct.
69	» 268	19 55 33	— 38 16.2	Bands?	
70	» 283	20 8 35	— 36 49.2	Type III.	Bands well marked.
71	U.A., Micr., 17	20 33 56	— 32 1.3	Bands?	
72	ω Capricorni	20 44 40	— 27 22.0	Type III.	
73	U.A., Micr., 35	20 46 55	— 28 22.6	Bands?	
74	U.A., Capr., 81	21 9 7	— 15 40.2	Type III.	
75	U.A., Pegasus, 9	21 36 16	+ 5 8.0	Type III?	
76	U.A., Pisc. Austr., 53	22 35 42	— 29 59.3	Type III.	
77	τ Aquarii	22 43 14	— 14 13.5	Type III?	
78	U.A., Aquar., 216	23 8 26	— 11 20.4	Bands?	
79	» 256	23 35 22	— 18 41.3	Bands?	

Harvard College Observatory, Cambridge, U.S., 1881 Oct. 11. *Edward C. Pickering.*

Osservazioni della cometa 1881 IV,

fatte al micrometro filare dell' equatoriale di Merz del R. Osservatorio del Collegio Romano.

1881	T. M. Roma	$\Delta\alpha$	$\Delta\delta$	Confr.	α app.	$\log p.\Delta$	δ app.	$\log p.\Delta$	Oss.	*
Luglio 23	$14^h 28^m 33^s$	$-\ 0^m\ 0^s.95$	—	12	$6^h\ 3^m\ 5^s.20$	—	—	—	T	1
	14 41 36	—	$-\ 0'\ 19''.5$	10	—	—	$42^0\ 9'\ 57''.6$	—	»	»
	14 54 40	$+\ 0\ 0.94$	—	16	6 3 7.09	—	—	—	»	»
24	15 8 1	$-\ 1\ 38.28$	$+\ 6\ 44.5$	12 : 4	—	—	—	—	»	2
25	14 46 39	$-\ 3\ 30.40$	$+11\ 47.3$	15 : 5	6 8 14.85	—	43 2 29.4	—	»	3
26	15 14 13	$-\ 2\ 44.31$	$-\ 3\ 44.6$	16 : 5	—	—	—	—	»	4
27	15 13 49	$+\ 0\ 45.65$	$-\ 7\ 57.9$	15 : 7	6 14 10.12	—	43 58 34.1	—	»	5
28	14 43 43	$+\ 3\ 48.04$	$+\ 1\ 12.3$	18 : 6	6 17 27.69	—	44 28 54.6	—	»	6
29	14 52 1	$+\ 0\ 32.72$	$+\ 0\ 33.2$	10 : 10	6 21 3.18	—	44 58 23.2	—	»	7
30	14 41 5	$-\ 1\ 36.61$	$+\ 4\ 43.3$	10 : 10	—	—	—	—	»	8
31	14 56 39	$+\ 3\ 18.51$	$-\ 8\ 2.0$	17 : 6	6 29 9.02	—	46 2 8.0	—	»	9
Agosto 1	14 50 40	$+\ 1\ 24.84$	$-\ 6\ 46.4$	29 : 10	6 33 43.58	—	46 35 1.8	—	»	10
2	14 53 0	$+\ 2\ 12.62$	$-\ 1\ 55.7$	24 : 8	6 38 45.86	—	47 9 3.9	—	»	11
3	14 53 34	$-\ 0\ 46.97$	$+\ 9\ 46.5$	21 : 7	6 44 18.29	—	47 43 44.9	—	»	12
4	15 7 9	$-\ 1\ 21.18$	$-\ 1\ 6.2$	24 : 8	6 50 26.85	—	48 19 17.8	—	»	13
5	15 31 20	$-\ 1\ 32.17$	$+\ 1\ 44.9$	17 : 6	6 57 17.88	—	48 55 29.2	—	»	14
6	15 0 46	$+\ 1\ 22.34$	$+\ 5\ 33.2$	18 : 6	7 4 37.58	—	49 30 24.7	—	»	15
7	15 25 28	$+\ 0\ 16.21$	$+\ 6\ 16.1$	7 : 7	7 13 2.55	—	50 6 11.0	—	»	16
9	15 33 46	$+\ 0\ 14.91$	$+\ 0\ 36.3$	10 : 10	7 32 36.65	—	51 13 33.0	—	»	17
10	15 44 57	$-\ 0\ 7.26$	$+\ 7\ 41.8$	7 : 6	7 44 11.95	—	51 43 55.9	—	»	18
11	14 52 34	$-\ 1\ 50.46$	$-10\ 11.1$	18 : 6	7 56 22.74	—	52 9 13.0	—	»	19
12	15 4 40	$+\ 3\ 16.57$	$-11\ 35.4$	9 : 4	8 10 33.39	—	52 30 23.1	—	»	20
13	14 44 39	$-\ 0\ 33.77$	$+\ 7\ 37.2$	9 : 9	8 25 53.46	—	52 43 48.4	—	»	21
15	8 59 52	$+\ 2\ 24.00$	$-\ 2\ 1.7$	15 : 5	8 56 45.60	—	52 43 11.4	—	»	22
16	9 2 6	$-\ 0\ 51.56$	$+\ 9\ 17.7$	5 : 5	—	—	—	—	»	23
17	8 44 11	$+\ 1\ 49\ 91$	$-\ 0\ 26.4$	15 : 5	9 36 33.95	—	51 47 55.5	—	»	24
18	9 11 56	$+\ 2\ 47.27$	$+\ 9\ 31.5$	15 : 5	9 58 20.62	—	50 50 18.2	—	»	25
19	8 50 31	$-\ 0\ 57.43$	$-\ 1\ 9.8$	15 : 5	10 21 41.96	—	49 32 49.4	—	»	26
20	9 31 39	$+\ 5\ 8.44$	$-\ 0\ 9.1$	9 : 3	—	—	—	—	»	27
22	8 39 38	$+\ 0\ 19.13$	$-\ 8\ 53.8$	10 : 9	11 22 44.24	—	43 18 1.5	—	»	28
23	9 17 22	$+\ 0\ 58.33$	$-10\ 33.0$	15 : 5	11 42 14.95	—	40 24 42.6	—	»	29
24	9 29 9	$+\ 5\ 52.33$	$-\ 5\ 29.3$	3 : 1	11 59 56.60	—	37 17 52.2	—	»	30
25	8 42 7	$+\ 7\ 14.78$	$+\ 0\ 41.7$	9 : 3	12 15 30.70	—	34 7 14.2	—	»	31
26	8 28 54	$+\ 0\ 48.26$	$-\ 6\ 56.6$	15 : 5	12 29 58.81	—	30 43 57.8	—	»	32
27	8 50 23	$-\ 0\ 43.38$	$+\ 8\ 15.7$	17 : 6	12 43 17.24	—	27 13 1.1	—	»	33
28	8 37 46	$-\ 2\ 20.00$	$-\ 1\ 55.6$	15 : 5	12 54 57.36	—	23 48 31.5	—	M	34
29	8 39 19	$-\ 1\ 39.21$	$-\ 6\ 26.4$	18 : 5	13 5 28.67	—	20 26 32.5	—	»	35
30	8 43 40	$-\ 4\ 47.99$	$+\ 1\ 13.7$	8 : 8	13 14 53.41	9.6655	17 11 23.7	0.7554	»	36
31	8 13 59	$+\ 0\ 26.71$	—	9	13 23 3.98	9.6561	—	—	»	»
»	8 16 33	—	$-14\ 7.4$	3	—	—	14 10 41.1	0.7435	»	37
Sett. 1	8 30 12	$-\ 3\ 4.46$	$-\ 6\ 34.8$	12 : 4	13 30 40.49	9.6531	11 14 20.9	0.7565	»	38
3	8 40 19	$-\ 1\ 4.47$	$-\ 7\ 29.5$	6 : 6	13 44 18.97	9.6476	5 57 38.2	0.7769	»	39

Stelle di Confronto.

*	α 1881.0	δ 1881.0	Autorità
1	$6^h\ 3^m\ 3^s.81$	$42^0\ 10'\ 23''.1$	Weisse 5^h2032
2	—	—	DM. $+\ 42^0$1493
3	6 11 42.86	42 50 48.6	Weisse 6^h254.255
4	—	—	DM. $+\ 43^0$1518

*	α 1881.0	δ 1881.0	Autorità
5	$6^h\ 13^m\ 22^s.03$	$44^0\ 6'\ 39''.0$	Weisse 6^h295
6	6 13 37.19	44 27 49.6	» » 301
7	6 20 27.98	44 57 57.6	» » 503
8	—	—	DM. $+\ 45^0$1322