

1894AN...135

Page	Star	Column	For	Put
296	1476	Decl. Austr.	18'	37' is Vesta
297	1582	Asc. Recta	7 ^s 68	21 ^s 24
325	1871	Mag.	6 ¹ / ₂	8
341	1487	Decl. Austr.	41° 56' 48".5	42° 16' 49".1... same as No. 1488
342	1630	Asc. Recta	56 ^m	52 ^m ... same as No. 1628
346	20	Mag.	9 ¹ / ₂	7 ¹ / ₂
349	342	Notas	?	variable

Fourteenth Volume (General Catalogue).

7	280	Asc. Recta, Prec., Decl. Austr.	7 ^s 74.. 3 ^s 026.. 25° 57' 31".1	7 ^s 77.. 3 ^s 031.. 24° 57' 30".5
12	—	Decl. Austr. Prec. An.	20"	19"
160	8206	Mag.	6 ¹ / ₂	8 ¹ / ₂
161	8256	Asc. Recta, Prec., Decl. Austr.	7 ^s 24.. 2 ^s 479.. 24°	7 ^s 03.. 2 ^s 586.. 20°
182	9285	Asc. Recta	12 ^m	11 ^m .. same as No. 9258
196	10014	Asc. Recta	37 ^m 59 ^s 53	38 ^m 1 ^s 53
199	10134	Asc. Recta, Prec., Decl. Austr., Var. Sec.	19 ^s 83.. 2 ^s 387.. 29°.. 0"312	18 ^s 67.. 2 ^s 621.. 20°.. 0"342
287	14607	Asc. Recta	35 ^m	34 ^m .. same as No. 14584
370	19061	Asc. Recta	13 ^s 65	13 ^s 32
414	21525	Asc. Recta, Decl. Austr. Prec.	46 ^m .. 11"046	47 ^m .. 10"972
469	24566	Mag.	6.8	8.1 is cumulus
497	26116	Asc. Recta, Prec., Decl. Austr.	43 ^s 87.. 3 ^s 921.. 33°	44 ^s 80.. 3 ^s 889.. 32°
507	26644	Mag.	9 ³ / ₄	8.1
520	27395 and 27396	—	Telescopeium	same star; Sagittarius
526	27793	Asc. Recta	39 ^s 51	39 ^s 17
531	28063	Asc. Recta &c.	21 ^m .. 6 ^s 375.. 11"597.. 0"753	20 ^m .. 6 ^s 385.. 11"525.. 0"757 is No. 28039
569	30093	Asc. Recta, Prec. An. α, Prec. An. δ	53 ^m .. 3 ^s 410.. 17"059	54 ^m .. 3 ^s 407.. 17"105
607	31997	Prec. An., Decl. Austr.	3 ^s 173.. 33° 27' 35".5	3 ^s 170.. 32° 27' 34".3
609	32132	Asc. Recta	48 ^s 54	48 ^s 21

Among these, the most remarkable case is No. 1923, page 140, of the VIIth Vol., where an additional correction of 2' 55" has been made. Here an error of 1' 5" had been assumed, owing to various mistakes, instead of one of 4' 0".

Cordoba 1894 Jan. 25.

John M. Thome.

Stars having Peculiar Spectra.

(Communicated by Edward C. Pickering, Director of Harvard College Observatory.)

An examination of photographs of stellar spectra, taken at the Peruvian Station of the Harvard College Observatory, under the direction of Professor S. J. Bailey, and forming part of the work of the Henry Draper Memorial, has added five faint objects to the list of stars having spectra of the fifth type. This increases the known number of these objects to 60. Two new gaseous nebulae have also been found in this examination. These two gaseous nebulae, together with that announced in the Astr.

Nachr. Vol. 128, p. 12, make three of these interesting objects which have been discovered at this Observatory by means of their photographic spectra. The approximate right ascensions and declinations for 1900, of these objects are given in the first and second columns of the following table, and their Galactic longitudes and latitudes in the third and fourth columns. The last column gives a brief description of the object.

α 1900	δ 1900	Gal. Long.	Gal. Lat.	Description
13 ^h 46 ^m 5	— 66° 1'	276° 42'	— 4° 52'	Type V
15 10.0	— 45 17	295 43	+ 9 10	Type V
17 11.8	— 34 18	319 58	+ 0 32	Type V
17 18.2	— 43 24	313 10	— 5 39	Type V
17 38.2	— 46 3	312 48	— 10 4	Gaseous Nebula
18 39.3	— 33 27	329 41	— 14 52	Type V
19 10.5	— 39 47	325 50	— 22 29	Gaseous Nebula

Handwritten: H. 2000

Handwritten: Can. nr. S. A. 2, 197, 14
D. 1000

The second star in the above list was found by Mr. *Luis Duncker* in Peru.

NGC. 6768 precedes the last object in the list 0^m9 and is 35' south, but it does not appear in the photograph on which the new gaseous nebula was discovered.

In addition to the objects mentioned above, two stars whose approximate positions for 1900 are in RA. 13^h26^m4, Decl. -53° 19', and RA. 14^h52^m2, Decl. -53° 0' have been found to possess spectra of the fourth type. The first of these is identical with Cord. ZC. 13^h1490 mag. 9.6.

Each of the above positions, except that of Cord. ZC. 13^h1490, was obtained from three or more adjacent catalogue stars, and the positions derived from the different stars differs on the average by less than one minute of arc. These positions, like those I have previously published in the *Astr. Nachr.*, in announcing new variable stars, and other objects having peculiar spectra, are, as has been

stated in each case, only approximate. The earlier positions, especially those of the six stars given in the *Astr. Nachr.* Vol. 130, p. 125, are less accurate than those I have given subsequently, since they were found by superposing the photographic plates on manuscript charts and reading off the approximate positions. Two of these six stars are within four degrees of the south pole and the error in right ascension, expressed in time, as compared with equatorial stars, is therefore magnified about seventeen times. To afford an additional indication that the right ascensions of these stars were less accurate the tenths of a minute were omitted. More accurate places were afterwards published in *Astronomy and Astro-Physics*, but as both series of positions were stated to be approximate, it has not been thought necessary to call attention to their differences until the exact positions could be given.

Harvard College Observatory, Cambridge, Mass., 1894 March 24.

M. Fleming.

Beobachtung des Cometen 1894 . . . (Denning März 26).

1894 März 31 9^h19^m32^s M. Z. Göttingen $\Delta\alpha = -2^m 13^s 1$ $\Delta\delta = +1' 53''$ α app. = 10^h12^m28^s00
 δ app. = +29° 30' 24.5 Red. ad loc. app. = +2^s03 0^o0.

Vergleichstern (1894.0): $\alpha = 10^h 14^m 39^s 07$ $\delta = +29^\circ 28' 31''.5$ Par. 12654.

Instrument: 6 z. Cometensucher, Ringmikrometer. — Comet schon sehr schwach, 11-12^{ter} Gr.

Göttingen 1894 April 13.

L. Ambronn.

Beobachtungen des Cometen 1894 . . . (Gale April 3).

Telegramm aus Boston, eingegangen April 27 Mitternacht:

»Comet Gale was observed by Douglass, Lowell Observatory, April 26.625 M. T. Greenwich RA. = 102° 30' PD. = 123° 30'.«

Telegramm aus Nizza, eingegangen April 30 11 Uhr Vorm.:

»Observation Comète Gale par Charlois 28 Avril 8^h15^m8 t. m. Nice AR. app. = 108° 24' 0" DP. app. = 117° 35' 32" *Perrotin.*«

Bei letzterem Telegramm fehlte die Controlzahl; indessen schien die Beobachtung richtig zu sein. Dieselbe wurde umgehend den Mitgliedern der Centralstelle telegraphisch mitgeteilt.

Kiel 1894 Mai 1.

Kr.

Éléments elliptiques de la comète 1894 . . . (Denning mars 26).

Ayant reçu de l'obligeance de M. Bigourdan une nouvelle observation du 25 avril, j'ai d'abord calculé l'orbite parabolique donnée ci-après à l'aide de trois lieux correspondant aux dates: 27 mars (15 obs.), 10 avril (1 obs.) et 25 avril (1 obs.). Les éléments paraboliques représentant mal le lieu intermédiaire, j'ai ensuite déduit une orbite elliptique qui est encore assez incertaine et qui assigne à la comète une période de 6.745 années.

I. Orbite parabolique.

$$\begin{aligned} T &= 1894 \text{ févr. } 14.27241 \text{ t. m. de Paris.} \\ \pi &= 133^\circ 30' 19''.6 \\ \Omega &= 75 \quad 9 \quad 6.4 \\ i &= 6 \quad 31 \quad 47.7 \end{aligned} \left. \vphantom{\begin{aligned} T \\ \pi \\ \Omega \\ i \end{aligned}} \right\} 1894.0$$

$$\log q = 0.088150$$

$$\Delta\lambda_2 = -23''.1, \quad \Delta\beta_2 = -37''.5.$$

II. Orbite elliptique.

$$\begin{aligned} T &= 1894 \text{ févr. } 9.08813 \text{ t. m. de Paris.} \\ \pi &= 130^\circ 22' 50''.2 \\ \Omega &= 85 \quad 2 \quad 50.0 \\ i &= 5 \quad 27 \quad 36.2 \end{aligned} \left. \vphantom{\begin{aligned} T \\ \pi \\ \Omega \\ i \end{aligned}} \right\} 1894.0$$

$$\begin{aligned} \varphi &= 42 \quad 50 \quad 47.6 \\ \mu &= 526''.079 \\ \log a &= 0.552637 \\ \Delta\lambda_2 &= +5''.8, \quad \Delta\beta_2 = +2''.4. \end{aligned}$$