Observations of Comet 1894 . . . (Gale April 1) at Windsor, N. S. Wales.

On April 2^d 23^h 15^m I received from Mr. Walter F. Gale of Sydney, F. R. A. S., a telegram announcing his discovery of a comet on the evening of the 1st instant. Owing to clouds in the south west it was not found by me till late in the evening of the 3^d. It appeared in the telescope as a round bright nebula pretty well condensed in the centre and with a faint tail. Owing to alterations to the equatorial room of the 8 inch telescope this instrument was not available on the 3^d and 4th. The accompanying observations were made with the square bar-micrometer in a dark field, the 4¹/₂ inch telescope being employed on the 3^d and 4th and the 8 inch instrument on the 5th and 6th. The positions for the last two dates, especially the 6th, are the most satisfactory. The comparison star of the 3^d and 4th is the north following component of a wide double star. Both components are to be found in the Cordoba Zones and the Cape Catalogue, 1880, but in the latter authority the NPD. are obviously transposed. See my correction in Astr. Nachrichten, Band 117, p. 47. News of the comet's discovery was telegraphed by me to the Melbourne Observatory early in the afternoon of the 4th.

1894	Winds. M. T.	Δ RA.	Δ NPD.	Cp.	RA. app.	NPD. app.	Red. ad l. app.	*
April 3	8 ^h 43 ^m 3 ^s	-4 ^m 52 ^s 09	+17' 14" 0	7	2 ^h 30 ^m 46 ^s 11	145° 34' 52" 1	-0 ^s 96 +1 ^s 9	1
4	7 11 18	+0 29.93	+18 26.1	10	2 36 8.12	145 36 3.9	-0.97 +1.6	1
5	7 36 29	-4 28.58	+ 1 59.5	7	2 42 17.32	145 36 20.0	-1.00 +1.8	2
5	7 36 29	-5 55.86	+ 5 38.4	7	2 42 17.06	145 36 20.5	-0.99 +1.8	3
6	7 27 32	+1 53.93	+ 1 0.6	10	2 48 39.82	145 35 20.8	-1.01 +1.5	2
6	7 27 32	+0 26.61	+ 4 39.3	10	2 48 39.51	145 35 21.1	-1.01 +1.5	3

Mean Places of the Comparison Stars for 1894.0.

*	RA.	NPD.	Authority
1	2 ^h 35 ^m 39 ^s 16	145° 17' 36" 2	Cord. Z. 128.13, Stone 1079
2	2 46 46.90	145 34 18.7	Cord. Z. 128.27, Stone 1169
3	2 48 13.91	145 30 40.3	Cord. Z. 128.29, Stone 1177

Private Observatory Windsor, N. S. Wales, 1894 April 8.

John Tebbutt.

Nouveaux éléments elliptiques de la Comète 1894 . . . (Denning mars 26).

J'ai comparé toutes les observations connues à une éphéméride, calculée à l'aide des éléments donnés dans A. N. 3227 et j'ai formé 4 lieux normaux des observations de mars 27 et 28 (43 obs.), mars 29 à avril 4 (67 obs.), avril 5 à avril 11 (20 obs.) et avril 24 à avril 27 (9 obs.). A ces lieux j'ai ajouté l'observation isolée du 6 mai de M. Palisa (A. N. 3228). Les corrections de l'éphéméride et les coordonnées des lieux normaux sont les suivantes :

No.	T. m. de Paris	$\Delta\alpha$	$\Delta\delta$	α 1894.0	δ 1894.0
I	Mars 28.00000	-0 ^s 10	+ 2" 4	150° 9' 4" 3	+31° 21' 9" 3
II	31.50000	-0.30	+ 2.4	153 13 21.4	+29 26 15.3
III	Avril 8.50000	-0.20	+ 4.2	159 17 6.7	+25 13 19.0
IV	25.50000	-0.22	+ 4.8	169 14 1.6	+17 22 13.4
V	Mai 6.37900	-1.79	+14.1	174 23 16.0	+13 8 48.0

En variant les logarithmes des distances géocentriques des lieux I et IV, j'ai reconnu que l'AR. du 6 mai est trop petite de 1^s par rapport aux lieux normaux. Je me suis provisoirement arrêté aux éléments suivants :

Époque 1894 avril 25.5 temps moyen de Paris.

$$\log A_1 = 9.602820; \quad \log A_4 = 9.817280$$

$$M = 10^\circ 56' 22".2$$

$$\pi = 130^\circ 22' 33".4$$

$$\Omega = 85^\circ 0' 37".2$$

$$i = 5^\circ 27' 57".1$$

$$\varphi = 42^\circ 57' 40".2$$

$$\mu = 522".299$$

$$\log a = 0.554725$$

$$\Delta\lambda = \begin{matrix} \text{II} & \text{III} & \text{V} \\ -2".6 & -2".0 & -15".5 \end{matrix}$$

$$\Delta\beta = \begin{matrix} \text{II} & \text{III} & \text{V} \\ +0".6 & +0".6 & -2".2 \end{matrix}$$