

it does not require a large dome, a circumstance of importance to amateurs. I have possessed telescopes of normal length, but I have learned to prefer the 'Dumpy.'"

COMET WOLF, (1884).

Under date of Sept. 23, the following elements and ephemeris of the newly discovered comet, known as comet Wolf, were communicated by telegraph from Harvard College observatory as follows:

Two positions of this comet have been obtained at Harvard College observatory:

	d.	h.	m.	s.		App. α .			App. δ .		
						h.	m.	s.	h.	m.	s.
Sept.	21	9	51	59	Cambridge, M. T.	21	15	52.88	21	52	37.8
"	22	7	50	46	Cambridge, M. T.	21	16	19.22	21	28	17.6

From these observations, together with the announcement of discovery position, given in Circular No. 51, the following orbit has been computed by Messrs. CHANDLER and WENDELL.

ELEMENTS.

$T=1884$, November, 25.03

$$\left. \begin{array}{l} \pi = 20 \quad 30 \\ \Omega = 199 \quad 31 \\ i = 31 \quad 22 \end{array} \right\} 1884.0 \quad \begin{array}{l} (C-O) \\ \Delta \lambda \cos. \beta = +0'.1 \\ \Delta \beta = 0'.0 \end{array}$$

$\log q = 0.2202.$

EPHEMERIS.

Gr. M. T.	App. R. A.			App. Decl.		Log. r .	Log. Δ .
	h.	m.	s.				
Sept.	24.5	21	17	23	+20 35	0.2669	0.0033
	28.5		20	1	18 41	.2617	9.9980
Oct.	2.5		23	20	16 43	.2566	9.9940
	6.5		27	21	14 41	.2518	9.9913
	10.5		31	58	12 38	.2473	9.9903
	14.5		37	24	+10 31	.2430	9.9903

Light, September 17, unity. From September 24.5, to October 14.5, the computations show an increase of light from 1.11 to 1.32.

This comet was discovered by Dr. WOLF, of Zurich, September 17, 1884. It has a well-defined nucleus, and a faint short tail directed away from the *Sun*.

NEW NEBULA.

August 17th, Mr. E. E. BARNARD, of Nashville, Tenn., discovered an exceedingly faint nebula. It lies in low power field, with the small bright planetary nebula No. 4510 of the General Catalogue, and is south of that object.

Its position is, R. A. $19^h 38^m 25^s$ } 1884.0
Decl. $-15^\circ 2' 50''$ }

This is the mean of two pointings with the 6-inch equatorial.

Quite a bright aurora was visible on the evening of the 13th inst. First noticed at $10^h 20^m$, at that time arch was about 10° above the horizon and nearly 4° in width. Very shortly, an appearance was presented resembling puffs of luminous smoke all along the arch, and at 10^h