Schreiben des Herrn *G. J. Chambers* an den Herausgeber.

The following notes on the late Comet were made with the aid of an excellent refractor of 3 inches aperture, by *Cooke* of York. The powers employed ranged from 21 to 120.

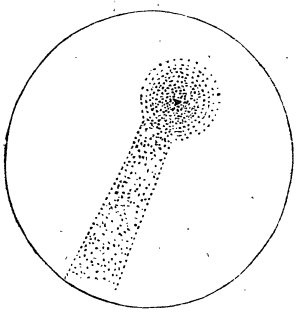
Aug. 3. Searched for the new comet and found the same easely; it being visible to the naked eye. The nucleus is peculiarly sharp and well defined, and as bright as a star of magn. 6; from it a jet or fan of light extends towards the sun. The coma or head has a very massive appearance and strongly conveys the impression that its form is globular. The tail is about 2° long.

Aug. 8, 11, 12, 15. The comet was seen on each of these nights but unsatisfactorily owing to clouds and haze.

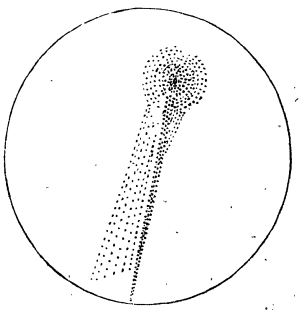
Aug. 15. A very clear sky and a low moon enabled the comet to be seen under more favourable conditions than has hitherto been the case. The brightness of the nucleus has increased to that of a star of mag. 4½. The coma is smaller in size but brighter.

Aug. 18. The luminous sector or fan spreading from the nucleus, on the side nearest the sun, is very distinct to night. The tail is about 2½° long and bifid. The right hand branch is the brighter and perfectly straight; the left hand branch is faint and ill-defined.

Aug. 19. No material change appears to have taken place.



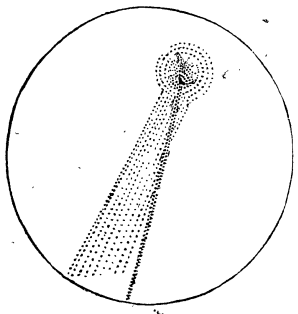
Aug. 18 10.30 pm.



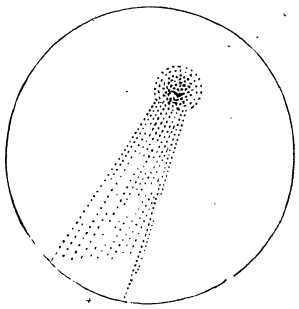
Aug. 22 10.30 pm.

Aug. 22. The comet is steadily improving in appearance. The head is decidedly smaller — more concentrated, that is — than it was four nights ago. The nucleus is less stellar in the telescope, though much brighter to the naked eye. It is fully equal to a star of mag. 3. As the angular size of the sector or fan has diminished it is by no means so striking, notwithstandig the increase in its brilliancy. The tail has a curious aspect; its bifidity differs from any thing I ever saw before either naturally or pictorially; a long narrow ray sketches from the nucleus for 5 or 6° and on the Eastern side there is another and much fainter strip of luminous matter, slightly inclined to the former but not reaching more than 2° from the nucleus. At 9.30 mean time a star of about mag. 7 was within the head of the comet, and the nucleus must have passed over or very near it, not long previously. By 11.0 the coma had reached another star about one magnitude smaller than the former one; the nucleus passed about 1′ or less to the south of it, and not centrally over it, as I had hoped, and anticipated would have been the case. At 11.45 the nucleus passed about ½′ south of another small star. In neither of the three cases could the light of the stars be said to have become in the least enfeebled by their immersion in the cometary matter.

Aug. 23. Last nights' discription applies pretty well to this evenings appearance of the comet. The set of light however instead of being a prolongation of the main tail is inclined thereto at an angle of about 60° and the eastern branch is perhaps a little shorter and a little broader. Five estimations give 12° or there abouts as the length of the main ray. Possibly a portion of the augmentation of the length must be set down to a better conditioned atmosphere.



Aug. 23 9.15 pm.

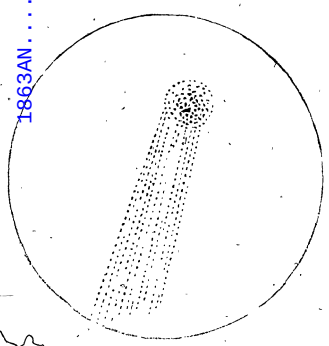


Aug. 24 9.30 pm.

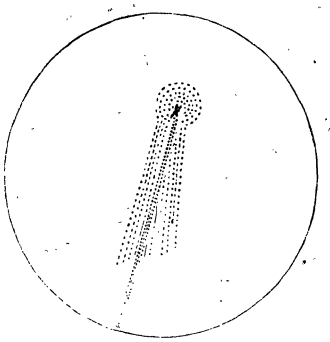
Aug. 24. The sector has largely increased in amplitude; it now covers fully 120° of a circle. The head is smaller but brighter, and there is less contrast than there was between the two branches of the tail which extends nearly or quite to η Draconis.

Aug. 25. Wind easterly and atmosphere unfavourable. The nucleus appears larger but much less sharply defined. The coma too is more evenly illuminated. The two branches of the tail have nearly coalesced and both are almost, if not quite, of equal intensity. The eastern or following edge is much better defined than the western or preceding one. Altogether the general effect is not so imposing as on August 23 though the calculated brightness stands at 14,2 against 11,8. The length of the tail does not appear to exceed 9°.

Aug. 26. A dull haze interfered with systematic observations though the comet was seen.



Aug. 25 10 pm.



Aug. 27 10 pm.

Aug. 27. The nucleus is extremely bright and well defined: the jet is smaller but in a line with the tail which seems to indicate the existence of some motion of rotation. The two branches of the tail have partly changed places; whereas the long ray was on the right (E.) a few nights ago, forming a well defined margin, with the faint branch on the left, there is now nebulous matter on both sides of the main ray, but as the original faint branch is narrower it would seem that the long ray had shifted its position a little.

Aug. 31. The comet attains its maximum brilliancy to night by calculation; the brightness of the head decidedly surpasses α Coronae Borealis of mag. 2, but I cannot help fancying that the maximum brilliancy is past by two or three days: the general effect is certainly inferior to what it was on the 27th. (This idea I have since learnt presented itself to atleast two the English observers.) By the time the twilight had ceased, the sky had become overcast.

Sept. 3. The comet has much deteriorated doubtless in a great measure, owing to moonlight. Perhaps 2° could sufficiently represent the length of the tail.

Sept. 4. Twilight, moonlight, and the comets augmented distance from us, has reduced it to a circular or at best, a pear-shaped mass of light presenting in my glass no features calling for special mention.

This was the last occasion on which I saw the comet. The accompanny sketches though roughly finished were drawn with care and I think fairly represent what was seen. I paid most attention to the delineation of the general outline of the head and tail. The circle represents a field about $1\frac{1}{2}$° in diameter.

N°2, Palace Gardens Terrace, Kensington, LONDON.
1862 October 23.

George J. Chambers.

Observations of Comet II. 1862, made with the Olcott Meridian Circle, at the Dudley Observatory.

By *G. W. Hough*, Assistant.

(Communicated by instructions from the Director Prof. *O. M. Mitchel*.)

This comet was discovered by Mr. *Thomas Simons* at 11o'clock on the 18th of July. A short time after the anouncement of the discovery I received a letter from Mr. *Swift*, an amateur astronomer, at Marathon N. S., in which he stated he had observed a Comet on the 15th and 16th of July; but presuming it to be Comet II. 1862 he gave no public notice of the observation.

From a diagram which he subsequently sent me, giving the position of the comet and a star near it, I found the following position:

M. T. Dudl. Obs.	AR ☄	Decl.
July 16 $9^h\,30^m$	$5^h\,19^m\,43^s$	$+67°\ 8'$

Of course this position is very rough, but perhaps as near the truth as could be expected from the means employed to obtain it.

The star of comparison was presumed to be № 5960 of Argelanders Northern Zones.

The following observations have all been made in the meridian, with the exception of July 18, when the comet was observed with the wire-micrometer of the equatoreal.

Star of comparison 10,5 mag.

☄ $\Delta\alpha = -6^s45$ $\Delta\delta = +55''28$

18 comp. for AR and 10 comp. for Decl.

The place of the star was determined by three transits at the lower culmination; observed with the Olcott Meridian Circle.

	* 10,5 app. AR	app. Decl.
1862 July 18	$5^h\,24^m\ 4^s03$	$+67°\,44'\,10''13$

The observations for AR are the mean of 15 wires, observed by the magnetic methode.

The declinations for July 25, 26, Aug. 3, 4, 10 and 18, have been observed in the usual way, using 8 microscopes.

The remaining observations have been made with the Declinometer, attached to the Meridian-Circle.

The advantage of the latter methode lies in the fact, that many bisections and readings can be made during the the time of transit.