

structure and convolutions of the jets issuing from it. From this time, to its final disappearance, the violence of action gradually calmed down, while the comet itself went southwards, and at length vanished from our horizon.

(46.) An idea of the actual dimensions of this comet may be formed from the measurements taken by Professor Bond on the 2d October, which, combined with the distance of the comets from the earth at that date afford the following results, viz. :—

	Miles.
Diameter of the bright internal pellet or nucleus, .	1,600
Distance from its centre to the summit of the first envelope, . . . . .	7,500
Distance to that of the second envelope, . . . . .	13,200
Breadth of the brightest part of the tail where it seemed (to the naked eye) to issue from the comet, . . . . .	90,000

to which it may be added that the actual length of the tail, when at its greatest development, could not have been less than 30 millions of miles, and those of the faint streaks or secondary tails 34 or 35 millions.

(47.) The comet of 1861, which burst suddenly on us in its full splendour on the 30th of June in that year (though it had been seen for seven weeks before in the southern hemisphere), was considered by those who saw it at its first appearance to surpass in brightness even that of 1858, and was remarkable for the extreme breadth and diffusion of its tail when first seen, arising from the circumstance of the earth having been then situated nearly in its prolongation. Indeed, it is not impossible that on that day we actually traversed some portion of it, our