

form of existence, in which, like the air itself, they are invisible. As the comet then gets heated a portion is actually vaporized—and the vapour condenses as it cools again. The whole substance of the comet of Halley, as you have heard, was so evaporated in 1835-6, all but what I suppose must have been really its solid body; that *star* which I have already mentioned, which was seen on the 22d January 1836: and all that curious process that went on afterwards, no doubt was that of the re-condensation of the evaporated matter, and its gradual re-absorption into and close around the body.

(52.) There is still one point in the history of comets which I have not touched upon, or but slightly. Comparatively only a few of the great number of comets which have been observed, and of which the orbits have been calculated, have been seen more than once—the great majority once seen, seem lost for ever. What becomes of them, is a very natural question. The answer to this is, that the time of the periodical return of a comet depends entirely on the distance to which it may run out from the sun. Now we know of nothing to interfere with or disturb the motion of a comet, once clear of the planetary system, between the farthest planet and the nearest fixed star; and that interval is so immense that the imagination is lost in attempting to conceive it. The farthest planet we know of is only 30 times the distance of the earth from the sun. Halley's comet in its elliptic orbit of 75 years, goes only a little beyond that, or to about 36 times the earth's distance. Donati's comet, if the computists are right, will return in 2100 years, and