

beyond definite and narrow limits assignable by calculation. With comets it is far otherwise. They are wild wanderers, and care nothing for beaten tracks. A comet is just as likely to appear in any one region of the starry heavens as in any other. They are no respecters of boundaries. The first time a comet is seen, no one can tell where it may next day be. The next observation still leaves a great uncertainty as to its future course. The third nails it. After three good observations, carefully made, of its place, we can thence foretell where it will go. Meanwhile, such is the variety of which their paths are susceptible, that for a very long time their movements were considered to be altogether capricious and unaccountable—creatures of chance—governed by no laws. Now the case is different. Most persons will remember that the comet of 1858 passed on the 5th of October of that year close to a very brilliant star, Arcturus, which shone through its tail at a very little distance from its root or outspring from the head. Well! within a very short time from the first appearance of that comet, while yet it was but a faint object, it was known to calculating persons that it *would* pass over Arcturus—the day—the hour—nay, almost the minute when the nucleus of the comet would be closest to the star were predicted—and the prediction was exactly verified. How this could happen I must now proceed to explain; but before I do so, I must premise that my hearers are not to be startled if I use some words that are not familiar to many of them, and ask for a little more of their attention than if I were merely telling some amusing story. What I am