

other means except heat, produces cold, that therefore all comets must be very cold; and neither argument would, in the least degree, afford matter even for a rational conjecture. Let us suppose a comet, of which we only know that at its perihelion it is nearer the sun than we are, and that its diameter is *one-fourth* of that of the earth. The calculation of probabilities shows that, of 281,000,000 of chances, there is only one unfavourable,—there exists but one which can produce a collision between the two bodies.

Without endangering the tranquility of mind which the above number ought to give to the most timid persons, we can say that if in calculating the probability of the collision of the earth and nucleus of a comet, we have taken the supposed estimate of the comet's diameter at one fourth of that of the earth, we have much underrated it: that the chances of their meeting, according to the calculation, will be much too low, in the case where the question would be not of the nucleus properly so defined, but of the nebosity which covers it on all parts. If then the number be taken at ten times the preceding, the result certainly will not be exaggerated. As for the nebosity, in its most habitual dimensions, the unfavourable chances will be from 10 to 20 in the same number of 281,000,000. Admitting then, for a moment, that the comets which may strike the earth with their nucleuses would annihilate the whole human race; then the danger of death to each individual, resulting from the appearance of an *unknown comet*, would be exactly equal to the risk he would run, if in an urn there was only *one single* white ball, of a total number of 281,000,000 balls; and that his condemnation to death would be the inevitable consequence of the white ball being produced at the first drawing.

Every man who is willing to make use of his reason, however he may be attached to life, will laugh at so small a danger. Well, then, the day on which a comet is announced, before observations have been made on it, before it has been possible to determine its path, then is there, for each inhabitant of our globe, the chance of the white ball from the urn of which I have just spoken.

Being quite ignorant both of the size of comets, and their quantities of matter, we can form no conclusions as to their effects, even upon the positions of the planets.—Hitherto, their influence, if any thing, has been very small; for, within the limits that must be allowed for error, even

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