urable distance from our system, the law of attraction according to the inverse square of the distance, prevails. And, according to the practice of astronomers when a law has been established, Tables have been calculated for the future motions; and we have Ephemerides of the revolutions of suns round each other, in a region so remote, that the whole circle of our earth's orbit, if placed there, would be imperceptible by our strongest telescopes. The permanent comparison of the observed with the predicted motions, continued for more than one revolution, is the severe and decisive test of the truth of the theory; and the result of this test astronomers are now awaiting.

[2d Ed.] [In calculating the orbits of revolving systems of double stars, there is a peculiar difficulty, arising from the plane of the orbit being in a position unknown, but probably oblique, to the visual ray. Hence it comes to pass that even if the orbit be an ellipse described about the focus by the laws of planetary motion, it will appear otherwise; and the true orbit will have to be deduced from the apparent one.

With regard to a difficulty which has been mentioned, that the two stars, if they are governed by gravity, will not revolve the one about the other, but both about their common centre of gravity;—this circumstance adds little difficulty to the problem. Newton has shown (*Princip.* lib. i. Prop. 61) in the *problem of two bodies*, the relation between the relative orbits and the orbit about the common centre of gravity.

*How many of the apparently double stars have orbitual motions?* Sir John Herschel in 1833 gave, in his *Astronomy* (Art. 606), a list of *nine* stars, with periods extending from 43 years ($\eta$ Coronæ) to 1200 years ($\gamma$ Leonis), which he presented as the chief results then obtained in this department. In his work on Double Stars, the fruit of his labors in both hemispheres, which the astronomical world are looking for with eager expectation, he will, I believe, have a few more to add to these.

*Is it well established that such double stars attract each other according to the law of the inverse square of the distance?* The answer to this question must be determined by ascertaining whether the above cases are regulated by the laws of elliptical motion. This is a matter which it must require a long course of careful observation to determine in such a number of cases as to prove the universality of the rule. Perhaps the minds of astronomers are still in suspense upon the subject. When Sir John Herschel's work shall appear, it will probably