

bodies fall sixteen feet a second, so at the distance of the moon they should fall  $\frac{1}{3800}$  of sixteen feet, or one-eighteenth of an inch, which as we have seen is the observed amount.

#### § IV.—THE ATTRACTION OF GRAVITATION.

288. In this way Newton discovered that the very same force that draws a stone to the earth, called the *attraction of gravitation*, keeps the moon in her path round the earth. Nor did the discovery end here, he showed that the earth and all the other planets were thus kept in their orbits round the sun; and that the same law of gravitation holds good with the most distant star. All the apparently irregular motions of the heavenly bodies have been reduced to law and order by Newton, who showed that all the motions were really regular, and therefore could be calculated beforehand. He thus enabled mankind not only to admire the divine beauty and harmony of the universe in which we dwell, but to make use of the motions of the heavenly bodies for purposes of daily life.

THE END.