

any farther particulars relating to eclipses, and especially into any details of a practical character. The reader will not, however, it is hoped, be satisfied with this outline, as he may easily acquaint himself with the method by which these phenomena are predicted; and will find more satisfaction in determining the time when an appearance of this kind will be seen, and will acquire more information by doing so, than he could obtain from such details as are suited to the character and objects of this volume.

This phenomenon is one of great importance to us, and must also be so to the inhabitants of the moon, if that planet be inhabited by beings of similar capabilities and wants as ourselves. By a lunar eclipse, the opinion that the earth is a spherical body is confirmed, for the shadow of the earth upon the lunar disk is always bounded by an arc of a nearly circular curve. Now this could not be the case if the shadow were not conical, and the shadow could not be conical if the earth were not spherical. It may also be deduced from the same phenomenon, that the sun is larger than the earth, and that the earth is larger than the moon; for if the sun were not larger than the earth, the shadow could not converge, or end in a point; and if the earth were not larger than the moon, the latter could never be totally eclipsed; but the earth's shadow envelops it at the distance of the lunar orbit. By eclipses, and especially those of the moon, the longitude of places may be determined, the latter being peculiarly adapted for the solution of this problem, because the appearance is the same in all places where it is visible.

It must not, however, be forgotten, that the calculation of the periods when eclipses have occurred has sometimes assisted in determining the time of historical events; and thus astronomy has lent its aid to literature. It is stated by Thucydides, that a solar eclipse was observed at Athens in the afternoon of a summer's day, in the first year of the Peloponnesian war; and it was so nearly total that the stars made their appearance. By calculation, it is found that this happened at about six o'clock in the evening, on the third of August, in the year 431 before Christ. When it is remembered that all our divisions of time are founded upon the motions of the heavenly bodies, and the phenomena which are thus produced, it will not appear singular that the record of eclipses should often assist the chronologist in the determi-