

Schubert however, arbitrarily, and as I think quite indefensibly, rejects altogether the result of the French arc, and assigns to the Russian double the weight of the Indian; a mode of procedure in which he will find, I presume, few to agree with him. A much fairer, indeed the only fair way to treat them, is obviously to ascribe to each of the separate results in taking the mean, a weight proportional to the total extent of the arc, and this gives for the length of the axis 41,708,710.0 feet. Comparing then the final results of the two modes of procedure we find,

From the former, 41,707,467 feet.
 And from the latter, 41,708,710 „

which differ only by 1243 feet, or less than $\frac{1}{4}$ of a mile—so that their mean or 41,708,088.5 f. is in all probability within a furlong, or one part in 64,000 of the truth.

(25.) From each of the great arcs of Russia and India, M. Schubert then obtains a separate value of the equatorial or the larger axis of the elliptic meridian to which it belongs; and by a similar treatment of the arc of Peru, which, lying under the equator, is especially favourable for the purpose, he obtains a third value of the equatorial diameter. The three diameters of the equatorial ellipse thus obtained, with the angles they include at the centre (which are the differences of longitude of the respective meridians, and which are as favourably arranged for the purpose as the nature of the case seems to admit), suffice for the determination of the major and minor axis of the equator, regarded as an ellipse, and the longitudes in which they lie, viz.:—