

Longitude of the vertex of the longer axis= $13^{\circ} 58' 30''$  east—or  $11^{\circ} 35' 15''$  E. of Paris) whence it is easy to conclude as follows:—

Diameter of equator in the longitude of Paris...41,852,695 feet.  
 Ellipticity of the Paris meridian..... $\frac{1}{288 \cdot 2}$  say  $\frac{1}{288}$

(35.) Calculating now the quadrant from this ellipticity, and from Captain Clarke's polar axis, we find it 32,814,116 feet, which exceeds ten million metres by 5124 feet, being in excess of that above found (4008) by 1116 feet; and corresponding to an aliquot error of one part in 6404, or on the metre itself to one 163d part of an inch. The aliquot error in our "geometrical yard" is also somewhat increased by the adoption of this polar axis, viz., to one part in 52,310, or to about one 1453d part of an inch on the yard.

(36.) As this memoir of Captain Clarke contains by far the most complete and comprehensive discussion which the subject of the earth's figure has yet received, and must be held as the ultimatum of what scientific calculation is as yet enabled to exhibit as to its true dimensions and form—this conclusion will of course be considered to supersede that arrived at in the foregoing pages.

COLLINCWOOD, Oct. 11, 1863.

*P.S.*—Some slight subsequent corrections made by Capt. Clarke in his calculations, founded on data quite recently published, make the polar axis approximate *still more nearly* to 500,500,000 inches.