

portion of the polar and equatorial diameters by its combination with an arc near the equator, is equivalent to one of  $9^{\circ}$  in the mean latitude of France, and of  $7^{\circ}$  in the mean latitude of Britain; its value, therefore, in the ultimate determination, may be estimated by the known importance which is attached to the national arcs of Great Britain and France. It may be further noticed, that it is equivalent to an arc in Lapland, of nearly six times the extent of the arc measured by the French Academicians; the importance of which at this day is such, in the view of the first geometrician of the age, that M. Laplace has recently proposed, that a fresh commission should be sent to re-determine the latitudes of the extremities.

The expediency, then, of undertaking such a measurement at Spitzbergen, is principally to be considered in reference to the natural difficulties which may impede its execution. And on this point, having myself actually resided some weeks on shore at Spitzbergen, having conducted operations of a similar nature, having personal knowledge of the general character of the country to be traversed, the difficulties it presents to persons carrying astronomical instruments, and the modes and facilities of overcoming those difficulties, and having made observations of much deli-