

rected by the best formulæ which are known; and if the result of such a reduction leaves any thing unaccounted for, the astronomer is forthwith curious and anxious to trace this deviation from the expected numbers to its rule and its origin; and till the first, at least, of these things is performed, he is dissatisfied and unquiet. The reference of observations to the state of the heavens as known by previous researches, implies a great amount of calculation. The exact places of the stars at some standard period are recorded in *Catalogues*; their movements, according to the laws hitherto detected, are arranged in *Tables*; and if these tables are applied to predict the numbers which observation on each day ought to give, they form *Ephemerides*. Thus the catalogues of fixed stars of Flamsteed, of Piazzini, of Maskelyne, of the Astronomical Society, are the basis of all observation. To these are applied the Corrections for Refraction of Bradley or Bessel, and those for Aberration, for Nutation, for Precession, of the best modern astronomers. The observations so corrected enable the observer to satisfy himself of the delicacy and fidelity of his measures of time and space; his Clocks and his Arcs. But this being done, different stars so observed can be compared with each other, and the astronomer can then endeavor further to correct his fundamental Elements;—his Catalogue, or his Tables of Corrections. In these Tables, though previous discovery has ascertained the law, yet the exact quantity, the *constant* or *coefficient* of the formula, can be exactly fixed only by numerous observations and comparisons. This is a labor which is still going on, and in which there are differences of opinion on almost every point; but the amount of these differences is the strongest evidence of the certainty and exactness of those doctrines in which all agree. Thus Lindenau makes the coefficient of Nutation rather less than nine seconds, which other astronomers give as about nine seconds and three-tenths. The Tables of Refraction are still the subject of much discussion, and of many attempts at improvement. And after or amid these discussions, arise questions whether there be not other corrections of which the law has not yet been assigned. The most remarkable example of such questions is the controversy concerning the existence of an Annual Parallax of the fixed stars, which Brinkley asserted, and which Pond denied. Such a dispute between two of the best modern observers, only proves that the quantity in question, if it really exist, is of the same order as the hitherto unsurmounted errors of instruments and corrections.

[2d Ed.] [The belief in an appreciable parallax of some of the fixed