

and Flamstead believed that they had discovered parallaxes of several seconds, whereas they had confounded the *proper* motions of the stars with the true changes from parallax. On the other hand, the ingenious John Michell (*Phil. Trans.* 1767, vol. lvii., p. 234–264) was of opinion that the parallaxes of the nearest fixed stars must be less than $0''\cdot02$, and in that case could only “become perceptible when magnified 12,000 times.” In consequence of the widely-diffused opinion, that the superior brilliancy of a star must invariably indicate a greater proximity, stars of the first magnitude, as, for instance, Vega, Aldebaran, Sirius, and Procyon, were, with little success, selected for observation by Calandrelli and the meritorious Piazzini (1805). These observations must be classed with those which Brinkley published in Dublin (1815), and which, ten years afterward, were refuted by Pond, and especially by Airy. An accurate and satisfactory knowledge of parallaxes, founded on micrometric measurements, dates only from between the years 1832 and 1838.

Although Peters,* in his valuable work on the distances of the fixed stars (1846), estimates the number of parallaxes hitherto discovered at 33, we shall content ourselves with referring to 9, which deserve greater, although very different, degrees of confidence, and which we shall consider in the probable order of their determinations.

The first place is due to the star 61 Cygni, which Bessel has rendered so celebrated. The astronomer of Königsberg determined, in 1812, the large proper motion of this double star (below the sixth magnitude), but it was not until 1838 that, by means of the heliometer, he discovered its parallax. Between the months of August, 1812, and November, 1813, my friends Arago and Mathieu instituted a series of numerous observations for the purpose of finding the parallax of the star 61 Cygni, by measuring its distance from the zenith. In the course of their labors they arrived at the very correct conclusion that the parallax of this star was less than half a second.† So late as 1815 and 1816, Bessel, to use his own

* Struve, *Astr. Stell.*, p. 104.

† Arago, in the *Connaissance des Temps pour 1834*, p. 281: “Nous observâmes avec beaucoup de soin, M. Mathieu et moi, pendant le mois d’Août, 1812, et pendant le mois de Novembre suivant, la hauteur angulaire de l’étoile audessus de l’horizon de Paris. Cette hauteur, à la seconde époque, ne surpasse la hauteur angulaire à la première que de $0''\cdot66$. Une parallaxe absolue d’une seule seconde aurait nécessairement amené entre ces deux hauteurs une différence de $1''\cdot2$. Nos observations n’indiquent donc pas que le rayon de l’orbite terrestre, que