words, "had arrived at no available result."* The observations taken from August, 1837, to October, 1838, by means of the great heliometer erected in 1829, first led him to the parallax of 0″·3483, which corresponds with a distance of 592,200 mean distances of the earth, and a period of $9\frac{1}{4}$ years for the transmission of its light. Peters confirmed this result in 1842 by finding 0″·3490, but subsequently changed Bessel's result into 0″·3744 by a correction for temperature.†

The parallax of the finest double star of the southern hemisphere (*a* Centauri) has been calculated at 0″·9128 by the observations of Henderson, at the Cape of Good Hope, in

39 millions de lieues soient vus de la 61e du Cygne sous un angle de plus d'une demi-seconde. Mais une base vue perpendiculairement soutend un angle d'une demi-seconde quand on est éloigné de 412 mille fois sa longueur. Donc la 61e du Cygne est au moins à une distance de la terre égale à 412 mille fois 39 millions de lieues." "During the month of August, 1812, and also during the following November, Mr. Mathieu and myself very carefully observed the altitude of the star above the horizon, at Paris. At the latter period its altitude only exceeded that of the former by 0″·66. An absolute parallax of only a single second would necessarily have occasioned a difference of 1″·2 between these heights. Our observations do not, therefore, show that a semi-diameter of the earth's orbit, or thirty-nine millions of leagues, are seen from the star 61 of Cygnus, at an angle of more than 0″·5. But a base viewed perpendicularly subtends an angle of 0″·5 only when it is observed at a distance of 412,000 times its length. Therefore the star 61 Cygni is situated at a distance from our earth at least equal to four hundred and twelve thousand times thirty-nine millions of leagues."

* Bessel, in Schum., *Jahrb.* 1839, s. 39–49, and in the *Astr. Nachr.*, No. 366, gave the result 0″·3136 as a first approximation. His later and final result was 0″·3483. (*Astr. Nachr.*, No. 402, in bd. xvii., s. 274.) Peters obtained by his own observations the following, almost identical, result of 0″·3490. (Struve, *Astr. Stell.*, p. 99.) The alteration which, after Bessel's death, was made by Peters in Bessel's calculations of the angular measurements, obtained by the Königsberg heliometer, arises from the circumstance that Bessel expressed his intention (*Astr. Nachr.*, bd. xvii., s. 267) of investigating further the influence of temperature on the results exhibited by the heliometer. This purpose he had, in fact, partially fulfilled in the first volume of his *Astronomische Untersuchungen*, but he had not applied the corrections of temperature to the observations of parallax. This application was made by the eminent astronomer Peters (*Ergänzungscheft zu den Astr. Nachr.*, 1849, s. 56), and the result obtained, owing to the corrections of temperature, was 0″·3744 instead of 0″·3483.

† This result of 0″·3744 gives, according to Argelander, as the distance of the double star 61 Cygni from the sun, 550,900 mean distances of the earth from the sun, or 45,576,000 miles, a distance which light traverses in 3177 mean days. To judge from the three consecutive statements of parallax given by Bessel, 0″·3136, 0″·3483, and 0″·3744, this celebrated double star has apparently come gradually nearer to us in light passages amounting respectively to 10, $9\frac{1}{4}$, and $8\frac{7}{10}$ years.