

XI. *Extract of a Letter from the Rev. John Brinkley, D. D. F. R. S. Andrew's Professor of Astronomy in the University of Dublin, to the Rev. Nevil Maskelyne, D. D. F. R. S. Astronomer Royal, on the annual Parallax of α Lyrae.*

Read April 12, 1810.

I HAVE now had sufficient experience of my eight feet circle, to be highly satisfied with it, and have arrived at one conclusion, that it is of importance in astronomy.

My observations on α Lyrae for the purpose of discovering an annual parallax now amount to 47 in number, viz. 22 near opposition, and 25 near conjunction, and the mean of these gives a result of 2,"52 as the parallax of the annual orbit for that star, and I have no doubt that it exceeds 2".

My observations of different circumpolar stars, and of the same star in different states of the thermometer, seem to require a small alteration in the numbers of Dr. BRADLEY'S formula for refraction.

The formula so altered is

$$\text{Refraction} = 56,"9 \times \text{tang.} \left\{ \text{Zen. dis.} - 3,2 \text{ Refr.} \right\} \times \frac{\text{height of barom.}}{29,6} \times \frac{500}{450 + \text{ther.}}$$

By means of this formula, the observations of circumpolar stars considerably distant, give the same co-latitude to a great degree of exactness.