

Extract of a Letter from Captain Jacob to Sir William Keith Murray.

“I can confirm your views of the colours of B and C of γ *Andromedæ*. I have never, indeed, seen them separate, but have long noticed that when the definition was best, the small end of the wedge was bluish and the other inclining to yellow.”

Mr. Dawes informed Sir William Keith Murray some time ago that he had also observed the stars with his 8-inch American achromatic glass, and found the colours were blue and yellow.

On the Law of Contraction of the Nebulosity in Encke's Comet, as given by M. Arago. By S. M. Drach, Esq.

In Arago's work on the comet of 1832, ch. xi. (Gold's Translation, p. 55) occurs a table, copied in Smyth's *Celestial Cycle*, vol. i. p. 253. It gives the heliocentric distance r of Encke's comet and the corresponding true diameters $2a$ of the nebulosity in radii of the earth. I do not know if these values have been intercompared, but they vary nearly as the $+\frac{5}{2}$ power of r .

Date.	r	$2a$	$2a \cdot r^{-\frac{5}{2}}$	$31\cdot38 r^{\frac{5}{2}}$	$2\cdot152 r^{-\frac{5}{2}}$
Oct. 28	1·4617	79·4	30·73	$2a + 1\cdot68$	+ 1·57
Nov. 7	1·3217	64·8	32·26	$2a - 1\cdot76$	+ 1·70
Nov. 30	0·9668	29·8	32·42	$2a - \cdot96$	+ 2·21
Dec. 7	0·8473	19·9	30·11	$2a + \cdot84$	+ 2·47
Dec. 14	0·7285	11·5	25·39	$2a + 2\cdot71$	+ 2·78
Dec. 24	0·5419	3·1	14·34	$2a + 3\cdot68$	+ 3·59

Mean of first 4 values = 31·38 ; general mean, 27·54. By adding the term $2\cdot152 r^{-\frac{5}{2}}$, we obtain the secondary corrections, nearly agreeing with the 1st, 5th, and 6th observations.

15th January, 1858.

On the Evidence which the Observed Motions of the Solar Spots offer for the Existence of an Atmosphere surrounding the Sun. By R. C. Carrington, Esq.

The protuberances observed around the sun's periphery during total solar eclipses, and the excess of light and heat radiated from the centre of the disk as compared with the parts near the circumference, tend so strongly to force upon us the conviction of the existence of an atmosphere of no inconsiderable amount, that it is of some importance to inquire whether the motions of the spots, in passing over the disk, present any favourable or unfavourable indications.