

Dear Jim, (77)

June 17, 1963

Here is a version of what might be used for comet positions. Much cruder devices may suffice - for instance on Alcock we used crosshairs made of glue, unilluminated.

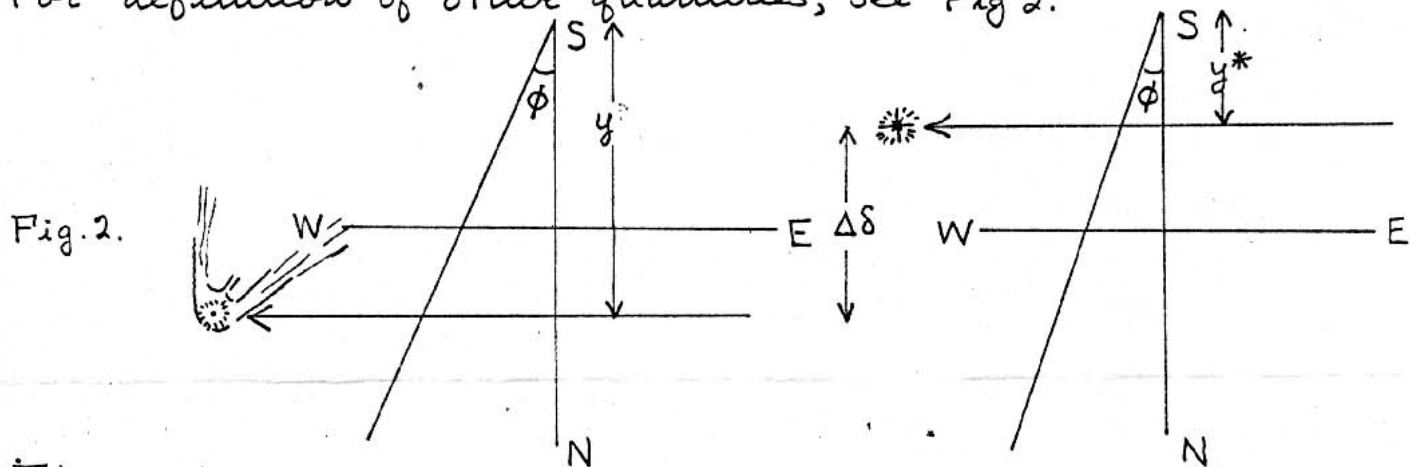
Thanks for distributing Mike's orbit on Comet Alcock.

I saw the comet last week with a $\frac{1}{2}^\circ$ tail and a strange elongated nucleus which also had a stellar part.

Sincerely,
Dennis Milon

Let α = right ascension of unknown object
 δ = declination " " "
 $\delta' = \delta$ " " " " as measured as accurately as possible from the atlas.

Let α^* , δ^* be the same quantities for the comparison star
 For definition of other quantities, see Fig 2.



Then:

- (1) $y^* = \frac{1}{4} (t^* - t) \cos \delta^* \cot \phi$, y^* in ' of arc, time interval in seconds of time
- (2) $y = \frac{1}{4} (t - t) \cos \delta \cot \phi$; same remarks.
- (3) $\Delta \delta = y - y^*$
- (4) $E = -7 \cdot 10^{-5} | (t - t) - (t^* - t^*) | \sin \delta$, an empirically derived error function, dimensionless. t in sec.
- (5) $\delta = \delta^* + (1 + E) \Delta \delta$
- (6) $f = \text{length of sidereal day} / \text{length of solar day}$.
- (7) $\Delta \alpha = f (t - t^*)$
- (8) $\alpha = \alpha^* + \Delta \alpha$