Similarly
\[ T = t + y, \quad T' = t + y', \]
and
\[ T' - T = \epsilon, \]
where, as before, \( T' \) and \( T \) refer to true and observed quantities respectively. It will be noticed that the errors in \( m \) and \( t \) have been neglected. We then obtain the equations
\[ T' = t - m + M', \]
\[ T = t - m + M, \]
and if we assume that
\[ T' = a'M', \quad T = aM, \]
we find that
\[ \frac{r_{T'M'}\sigma_{T'}\sigma_{M'} - r_{TM}\sigma_T\sigma_M}{\sigma_{M'}} = \frac{r_{T'M'}\sigma_{T'}\sigma_{M'}}{\sigma_{M'}} - 1 = \frac{a'^2}{\sigma_{M'}^2}, \]
that is,
\[ \frac{r_{T'M'}\sigma_{T'}\sigma_{M'} - r_{TM}\sigma_T\sigma_M}{\sigma_{M'}} = \frac{r_{T'M'}\sigma_{T'}\sigma_{M'}}{\sigma_{M'}} + 1 - \frac{a'^2}{\sigma_{M'}^2}, \]
or
\[ a' = \frac{\sigma_{M'}^2}{\sigma_{M'}^2} a + \frac{\sigma_{M'}^2}{\sigma_{M'}^2}, \]
This formula corresponds to that given by Seares.* The method may easily be extended to other variables provided that linear regression can be assumed.

NOTE ON MR. R. A. McINTOSH’S PAPER:
“THE VELOCITIES OF METEOR STREAMS.”


In M.N., 96, 704, 1936, Mr. R. A. McIntosh suggests a method for determining the velocities of meteors by measuring the displacement of the radiant in northern and southern latitudes. There is a fundamental error in the method which renders it useless, and this arises from the manner in which Table I is compiled.

Using Mr. McIntosh’s symbols and noticing that \( \tan \frac{1}{2} \Delta Z = \frac{1}{2} \Delta Z \) for all practical purposes, since \( \frac{1}{2} \Delta Z \) is less than \( 10^\circ \),
\[ \frac{1}{2} \Delta Z_N = \tan \frac{1}{2} Z_N \tan \frac{1}{2} \pi, \]
\[ \frac{1}{2} \Delta Z_S = \tan \frac{1}{2} Z_S \tan \frac{1}{2} \pi, \]
from which
\[ \frac{1}{2} \Delta Z = \tan \frac{1}{2} \pi (\tan \frac{1}{2} Z_N + \tan \frac{1}{2} Z_S), \]
where \( \Delta Z \) is the total zenithal displacement—that is, the sum of the combined displacements. As it is the same shower, \( \pi \) is the same for both positions.

* M.N., 84, 15, 1923.