

The mean distance of the group of stars was evaluated from the formula

$$\pi_m = 4.738 \frac{\tau_m}{V_m}$$

Where π_m is the mean parallax.

τ_m is the mean component of proper motion at right angles to the solar motion.

V_m is the mean radial velocity.

Eighty-three τ 's are positive and eighty-four negative, and their average value is $0''.339$, which makes π_m computed $0''.106$. The mean parallax as observed for the same stars is $0''.072$. If we reject a dozen stars whose proper motions are large and which were not rejected by the condition that the radial velocity be under fifty kilometres, we obtain a computed mean parallax $0''.085$ as opposed to $0''.060$ observed. The rejection of these stars does not alter the ratio of the computed and observed parallaxes materially.

Methods of determining the mean distance of the stars based upon the data from the v components are still available, and while these can not be considered as having as much weight as those based on the τ components, it is of interest to see how they agree with the results above.

The first method is based upon the magnitude of the parallactic motion. We have determined by a system of trials, that mean distance, such that when each star is corrected for the solar motion, the total sum of the positive v components is equal to the sum of the negative. The mean parallax that will accomplish the result is $0''.105$, a value almost in exact agreement with the value found from the τ components. Rejecting the same dozen stars as before would yield the value $0''.092$.

When the v components have been corrected on the basis of this mean distance, the corrected values may be treated as the τ components to yield a third value for the mean distance of the stars.

$$\pi_m = 4.738 \times \frac{v_m^1}{V_m}$$