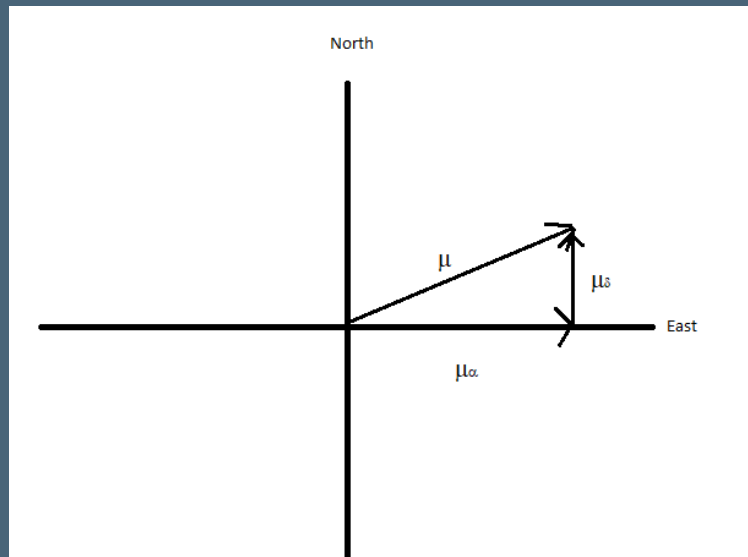


# A BEAUTIFUL DAY IN THE NEIGHBORHOOD: DEVELOPING SOFTWARE FOR DETERMINATION OF STAR CLUSTER MEMBERSHIP OF NEIGHBORING STARS

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Proper Motion

$$P_{\mu}(i) = \frac{n_c \cdot \phi_c^v(i)}{n_c \cdot \phi_c^v(i) + n_f \cdot \phi_f^v(i)}$$

Probability equation



Test Cluster NGC 1960

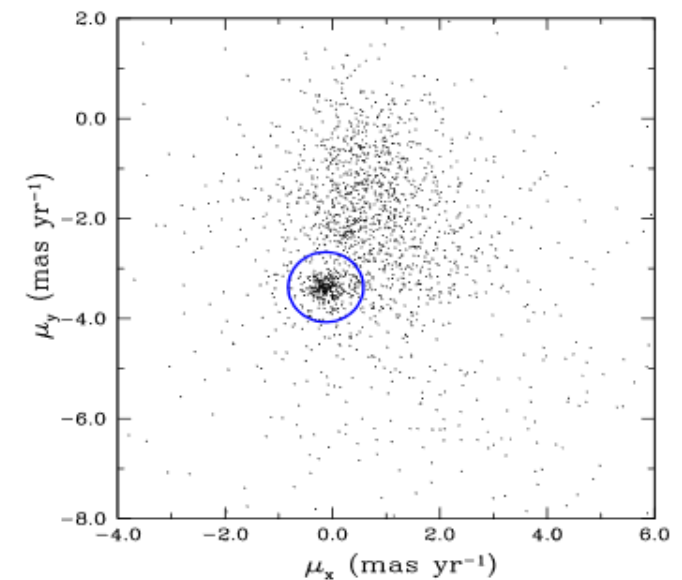


Figure 1. Vector-point diagram of the proper motions of stars constructed using Gaia DR2 proper motions in the field of the cluster NGC 1960.

Vector Point Diagram (Joshi et. al, 2019)