# A NEW PHOTOMETRIC INVESTIGATION OF THE YOUNG OPEN CLUSTER NGC 663

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ABSTRACT

The investigation of the open cluster NGC 663, based on the application of the method of *UBV* three colour photometry and the use of new photographic material, lead to a new distance to the cluster of 2550pc, E(*B-V*) & E(*U-B*) colour excesses of 0.74 & 0.53 mag and consequently a total visual absorption $A_V$ of 2.22 mag. An age of $3.9 \times 10^7$ y and a spectral type B2-B3 can be estimated for it; accordingly, it fits well the Perseus Arm (+1) near the outer edge and lies below the galactic plane at a distance of 47 pc.

From the distribution of 476 stars investigated, around both the ZAMS and the apparent centre of the cluster, 270 probable physical member stars could be separated from the field stars and neither late type giants nor a giant branch are in existence.

NEW RESULTS

| | | | |
|---|---|---|---|
| (m-M) | 14.25 mag | Distance | 2550 pc |
| $E_{B-V}$ | 0.74 | Age | $3.9 \times 10^7$ years |
| $E_{U-B}$ | 0.53 | Spectral Type | B2-B3 |
| $A_V$ | 2.22 | No. of Probable | |
| $(m-M)_o$ | 12.03 | physical members | 270 |



*James E. Hesser (ed.), Star Clusters, 233–234.*

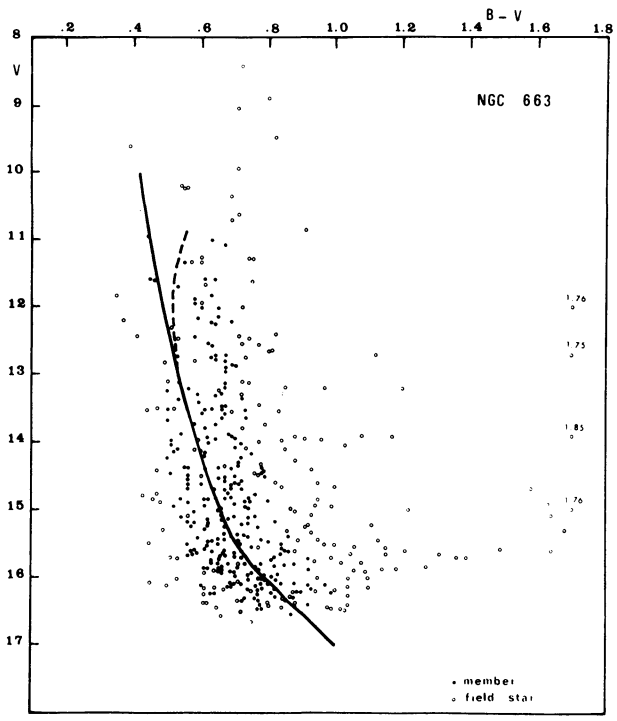


Figure 1. The $V,B-V$ diagram for NGC 663.

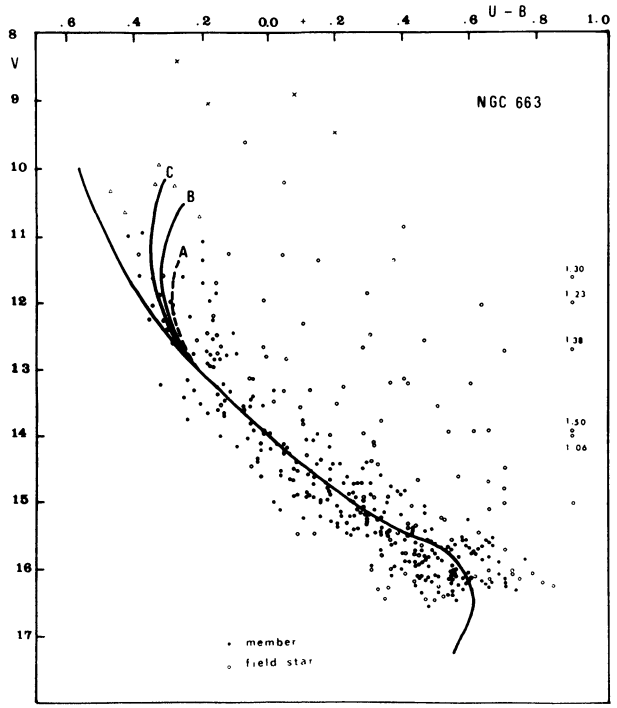


Figure 2. The $V,U-B$ diagram for NGC 663.

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