

PHOTOMETRY OF GALACTIC GLOBULAR CLUSTERS OF THE DISK SYSTEM

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The ages of the galactic globular clusters belonging to the disk subsystem are still widely unknown. By considering the HB morphology Richtler et al. (1991) were led to the conjecture that some of the disk clusters may resemble the populous intermediate-age clusters in the Magellanic Clouds, but no main-sequence photometry was published at that time. We now present B,V photometry for the clusters NGC 6496, 6624, and 6637 (M69) which in all cases show the turn-off point and allow reliable age determinations.

The data were taken with the MPIA 2.2m telescope at ESO, La Silla in June 1990. Local standards in NGC 6624 and 6637 enabled a firm photometric scale, while the zero-point for NGC 6496 is still preliminary. DAOPHOT was used for the reduction of the CCD frames.

In all cases HB-T0, the magnitude difference between the horizontal branch and the turn-off, is 3.5 ± 0.1 mag, thus placing our objects among the **old, "classical", globular clusters**.

Recently, Hatzidimitriou (1991) suggested that NGC 6342 could have a lower age limit of 5 ± 2 Gyrs, thus being the first representative of a class of intermediate-age clusters. We observed it recently at La Silla. The weather conditions, however, were very bad, but even with the limited quality of our V, (V-R) diagram we can reject an age of 5 Gyrs, while the minimum age for the clusters is about 8 Gyrs.

We also considered the morphological parameters $\Delta V_{1.4}$ and $(B-V)_{0.8}$ of the CMDs to estimate the metallicities of NGC 6624 and 6637. We got from $\Delta V_{1.4}$ -1.1 dex and -0.9 dex for NGC 6624 and 6637, resp., and from $(B-V)_{0.8}$ -0.9 dex and -0.8 dex. These values are considerably metal poorer than the values derived from integral photometry.

Other work also indicates that the metallicity scale of "metal rich" clusters is not yet firmly established: Friel and Geisler (1991) derived from Washington CCD-photometry -1.05 and -0.25 dex for NGC 6496 and 5927, resp. François (1991) got $[Fe/H] = -1.08$ dex for NGC 5927 (!) from high resolution spectroscopy. A new, homogeneous scale, based on individual stars rather than integrated properties is urgently needed. CCD photometry in intermediate/narrow bands is a promising approach.

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