STAR FORMATION OF STAR CLUSTERS IN THE SMC AND THEIR ADJOINING FIELDS.

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Photometric and recent spectroscopic studies of the SMC have shown that the differences observed in the SMC clusters and those of our Galaxy could be attibuted to differences in metallicity, star formation rate and/or the Initial Mass Function (IMF) (Humphries, 1983). The studied clusters NGC152 and KRON3 are located at the west side of the bar of the SMC and their adjoining fields represent the halo population of this galaxy.

From photographic plates taken with the 3.8 m AAT telescopes (Stewart, 1980) the LFs were found (Kontizas et al; 1984) and compared to theoretical models (Stryker, 1984). The bright part of the LF and spectral classification of the bright stars (Kontizas et al, 1985) in these clusters has provided the observed ratio of C/M stars, that was compared to the theoretical ratios derived by Miller and Scalo (1982).

From the above investigation it was found that :
1) The faint part of the observed LF of both fields (Fig 1a) seems to fit the theoretical LF Stryker (1984) implying constant star formation, low metallicity stars, masses of 0.5-3$M_{\odot}$ and ages younger than $5x10^9$ with a strong component of intermediate age stars.

2) The cluster's LFs (Fig. 1b) fit the models by Stryker (1984) implying intermediate age stars of low metallicity and constant birth-rate.

The comparison of the observed C/M ratios with the theoretical models (Miller and Scalo, 1982) implyies that either the metallicity is very low or their masses are high. Considering that the LF supports the low metallicity assumption it can be concluded that the field and clusters are rather intermediate age stellar population of low metallicity, constant birth rate and continuous star formation for

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about $5x10^9$ years.

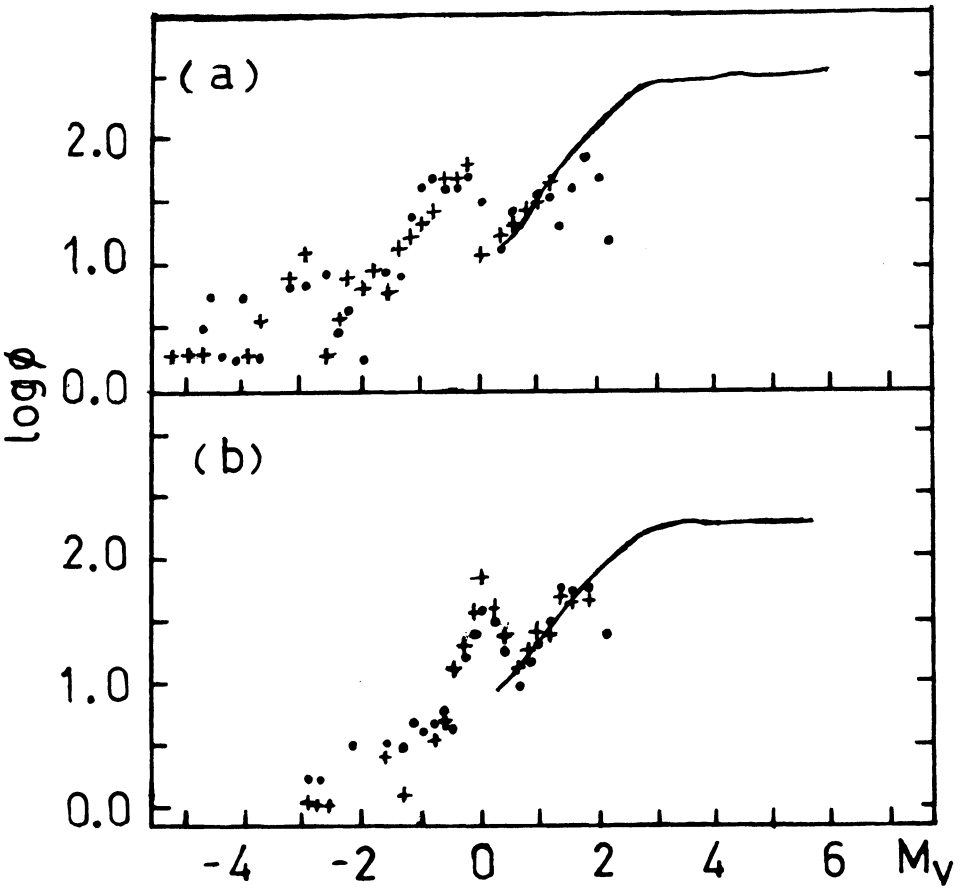

Figure 1. LFs of (a) the clusters NGC152 (crosses), KRON3 (dots) and (b) their adjoining fields. The solid line represents the theoretical model (Stryker, 1984).

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