

THE COLOUR MAGNITUDE DIAGRAM OF A SECOND FIELD IN THE SMC HALO

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ABSTRACT

A colour magnitude diagram of a field in the south-west periphery of the SMC reveals a population similar to that obtained earlier in another field, with an age of 3×10^7 years. The present field is 3.5 from the SMC centre, more than a degree more distant than the first one. The similarity in stellar content between the two emphasises the widespread nature of this population.

OBSERVATIONS

The field examined is centred on $(00^{\text{h}} 09^{\text{m}}.8, -73^{\circ}36')$ (1980). Four electronographs each in B and V were obtained using the 8 cm McMullen camera with the 1.5 Danish telescope at La Silla, Chile. Exposure times were all 60 minutes on L4 emulsion. Six standard stars were observed photoelectrically by R.D. Cannon using the Danish 0.5 m telescope. The electronographs were reduced following the procedures already described (Hawkins and Brück 1982).

RESULTS

The colour magnitude diagram (Figure 1) has the same general morphology as that obtained for the first field (Hawkins and Brück 1982) at $(0^{\text{h}} 26, -73^{\circ}0)$ (1950), which we interpreted as signifying an intermediate age population, with an age of $3 \pm 1 \times 10^7$ years. The present observation refers to a field 3.5 from the SMC centre and well away from the Bar. It was intended, in choosing this field, to decide whether there was evidence of a different, older, population in the outer regions of the SMC which would be expected to become relatively more conspicuous the further one moved outwards from the centre. The similarity in the morphologies of the CM diagrams suggest that the intermediate age population is still dominant in the second field and is indeed widespread in both Clouds. Reductions of similar observations of a third field at a still greater distance from the SMC are currently being carried out.

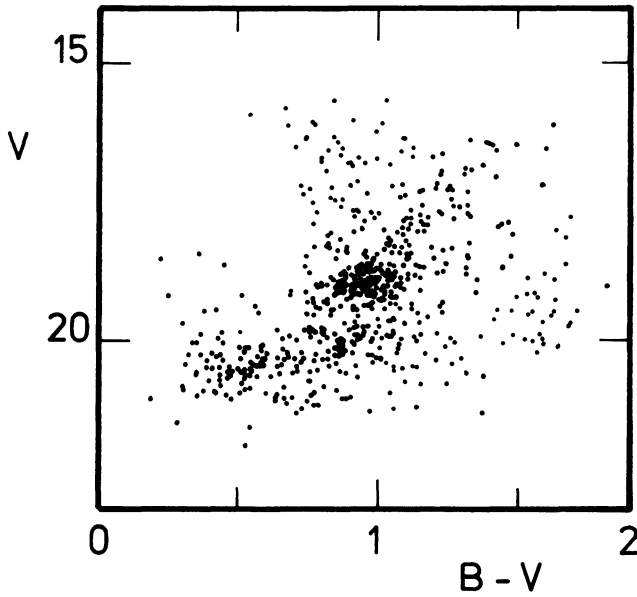


Figure 1. Colour-magnitude diagram of the SMC halo field.

REFERENCE

Hawkins, M.R.S. and Brück, M.T.: 1982, *Mon. Not. R. astr. Soc.* 198, 935