

A STUDY OF THE DARK PATCHES NGC 2209

P.G. Ostrov, J.C. Forte (FCAGLP, CONICET)

The globular cluster NGC 2209, belonging to the LMC, shows a striking "hole" in which there are no stars, as well as some other less evident structures. Roberts (1960), Kanagy and Wiatt (1978) concluded that it is very unlikely that such "holes" are caused by statistical fluctuations in the distribution of bright stars. Dottori, Melnick and Bica (1987) carried out a CCD photometry in the B,V and I bands, determining that stars superimposed with the patch are unreddened. Our photometry confirms this result, suggesting that the patches are originated by a cloud of dark matter in the interior of the cluster. In Fig.1, are shown the positions of two stars in the most evident hole. Fig. 2, shows the positions of these stars in the T_1 vs $(C - T_1)$ diagram. The observations were carried out with the 1.5 m telescope at the CTIO. CCD frames of NGC 2209 were obtained in the C,M, and T_1 bands of the Washington's photometry System. The photometry was carried out using DAOPHOT. In order to avoid large errors in the sky value determination in more crowded regions toward the center of the cluster, a model of the sky brightness due to unsolved stars was constructed.

References

- Dottori H., Melnick J., Bica E. (1987) Rev. Mex. Astron. Astrof. 14,183
Kanagy S.P., Wiatt S.P. (1978) A.J. 83(7),779.
Roberts M.S. (1960) A.J. 65, 457.

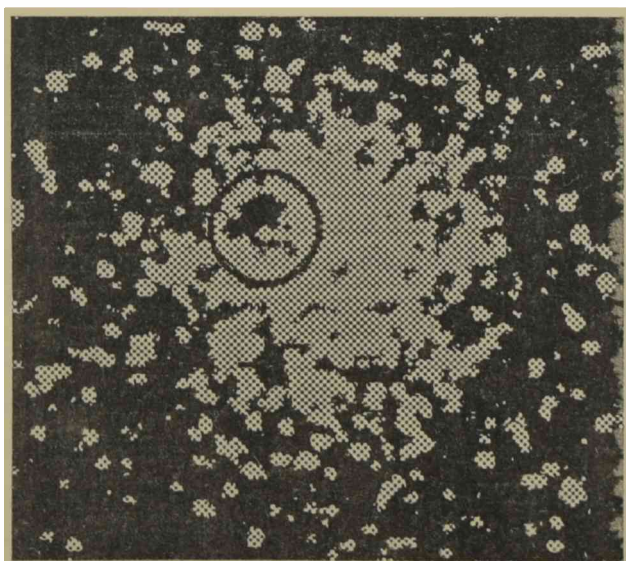


Fig.1

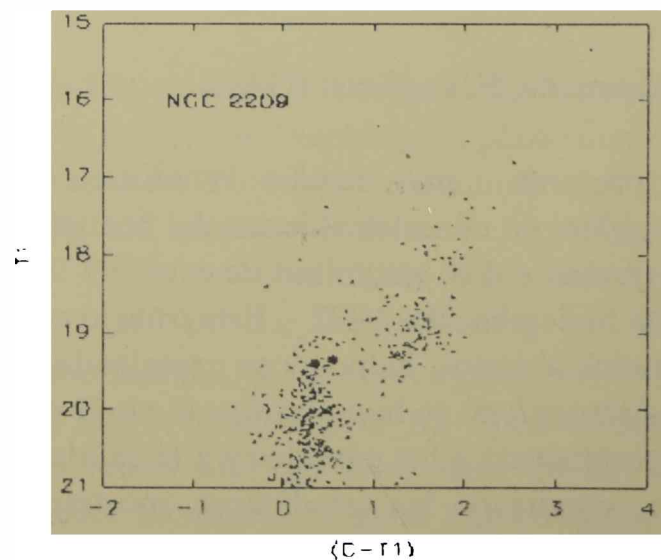


Fig.2