

Variable Stars in the Fornax Dwarf Galaxy

D. Bersier, Peter R. Wood

*Research School of Astronomy & Astrophysics, Weston Creek,
ACT2611, Australia*

Abstract. We present the first results of a search for variable stars in the Fornax dwarf galaxy.

We have surveyed a $40' \times 40'$ field. We have obtained 20 epochs with the MACHO camera (filters $V_M R_M$) on the 1.3-m telescope (Mt Stromlo) and 15 VI epochs on the 1-m telescope at Siding Spring, over a time interval of five months. To look for variables, we used the method proposed by Welch & Stetson (1993). The variability index I_{WS} is plotted in Fig. 1. Non-variable stars cluster around 0. The “finger” pointing upward at $V \approx 21.3$ is caused by RR Lyrae stars. There are ≈ 1200 candidate RR Lyrae variables.

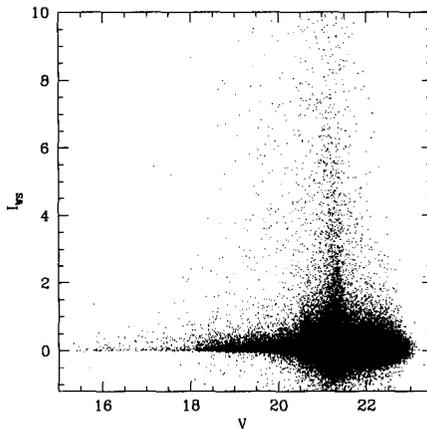


Figure 1. The variability index I_{WS} as a function of V magnitude. Non-variable stars cluster around $I_{WS} = 0$, a large positive value is an indication of variability.

Reference

Welch, D. L. & Stetson, P. B. 1993, *AJ*, 105, 1813