

Tracing Large-Scale Structure with Galaxy Objective-Prism Spectra.

Q.A.Parker, H.T.MacGillivray and S.M.Beard
Royal Observatory, Blackford Hill, Edinburgh.

A new and promising use of galaxy objective-prism spectra as a means of highlighting features in the large scale galaxy distribution has been recently reported by Parker et al. (1987). The technique relies on the property that galaxies with identifiable 4000\AA features in low dispersion objective-prism spectra are mostly ellipticals (Cooke, 1980), and that early type galaxies seem to delineate structure and clumpiness in the galaxy distribution (e.g. Giovanelli and Haynes, 1982). The effect is most striking when large numbers of objective-prism galaxy spectra are considered. Figure 1 gives the X-Y plot for 1539 galaxies with 4000\AA features to $B_j=18.7$ in one UKST field out of a manually measured sample of 2903 galaxy prism spectra. Substantial clumpiness is evident. This technique can trace structure in the galaxy distribution across many UKST fields to depths of $400 h^{-1}\text{Mpc}$.

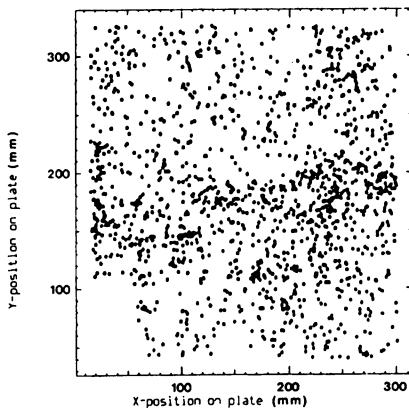


Figure 1
All galaxies with objective
-prism redshifts, $b_j \leq 18.7$.

References.

- Cooke, J.A., 1980. Ph.D. thesis, University of Edinburgh.
Giovanelli, R., & Haynes, M.P., 1982. *Astron.J.*, 87, 1355.
Parker, Q.A. et al., 1987. *Astron.Astrophys.*, 173, L5-L7.