

SPECTROSCOPIC AND PHOTOMETRIC NEARBY FIELD GALAXY SURVEY

R.A. JANSEN AND M. FRANX

*Kapteyn Astronomical Institute, Landleven 12, P.O.Box 800,
NL-9700 AV Groningen, The Netherlands*

D.G. FABRICANT

*Harvard-Smithsonian Center for Astrophysics, 60 Garden Street,
Cambridge MA 02138, USA*

AND

N. CALDWELL

*F.L. Whipple Observatory, Smithsonian Institution, P.O.Box
97, Amado AZ 85645, USA*

Galaxy evolution is one of the key questions in current astronomy. Observations of strong and recent galaxy evolution conflict with previous ideas of orderly and early evolution of galaxies.

The galaxy evolution theories can be tested by comparing the images and spectra of galaxies at different redshifts, *if* account is taken for the biases in the comparison of an “average” nearby galaxy and an “average” distant galaxy and *if* the light distributions are sampled in the same way.

The purpose of our survey is to obtain an accurate description of the distribution of magnitude, structural parameters, color, and spectral type for a large number of field galaxies. Of these galaxies we will measure star formation rate and star formation history and calculate detection rates at increasing redshift. These data will be used as an aid in understanding the spectra of galaxies at higher redshift, and in measuring the changes in star formation rates over time.