

The 2dF Galaxy Redshift Survey (2dFGRS)

This is a major new redshift survey being carried out with the purpose-built 2dF (two-degree field) spectrograph on the Anglo-Australian Telescope in eastern Australia.

When completed in 2001, the 2dFGRS will have high-quality spectra and redshifts for 250,000 galaxies brighter than $b_j=19.5$ (extinction-corrected).

The galaxies cover a total area of about 2,000 square degrees selected from both hemispheres.

A valuable resource

Significant results so far:

- The most accurate measurement to date of large-scale galaxy clustering
- Measurements of the total mass density of the Universe and of the relative amounts of baryons and dark matter
- Galaxy luminosity functions for different spectral types
- Galaxy stellar mass functions and the total stellar density of the Universe
- The dependence of galaxy clustering on luminosity
- A detailed census of the local galaxy population

Potential uses of the data include:

- Tests of cosmological inflation
- Studies of how individual galaxies are affected by the density of matter in their environment
- Large samples of rare objects for follow-up studies
- Studies of the spatial distributions of galaxies as a function of luminosity, type and star-formation.

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www.mso.anu.edu.au/2dFGRS/Public/team.html

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First data release June 2001

The first 100,000 redshifts

The most comprehensive map of the local universe and the largest database of galaxy spectra ever assembled

www.mso.anu.edu.au/2dFGRS/

Image: Robert Smith