

Classifying Small Galaxies

Research Question

Galaxies come in two major types: spiral and elliptical. But some galaxies are so small and faint that it's hard to tell what type they are. How can you classify these small, faint galaxies?

Things you might think about

1. How do you classify big galaxies when you look at them?
2. What properties of small galaxies could you measure?
3. What properties could be different in spirals and ellipticals?
4. What types of galaxies would you expect to be the brightest? The reddest? The bluest?
5. What can a galaxy's spectrum tell you about the galaxy?



One of many small galaxies seen by the SDSS

Tools that might help you (all links open in new windows)

[Navigate](#): use this tool to get data on single galaxies

[Search Form](#): use this tool to search for data on many galaxies. See the [user's guide](#) to learn how to use the tool.

[Image List](#): use this tool to get thumbnail images of galaxies that meet your search criteria

[SQL Search](#): use this tool to write complex Structured Query Language (SQL) searches for galaxies

Science background (new windows)

[SkyServer galaxies project](#)

[Galaxy Zoo](#) (a project where you can classify galaxies)

["Galaxy" Encarta article](#)

[Classifying Messier galaxies](#) (from the Students for the Exploration and Development of Space)

[List of SDSS spectral lines](#)

Hints and cautions (new windows)

If you look at spectra, study the line labels carefully. Not all of them are element names!

You can use SQL [aggregate functions](#) (like avg, min, max) to do your analysis.

Look at the data points for "petroR50_g" and "petroR90_r" in the *Galaxy* table in the [Schema Browser](#). What do those terms mean?