

## Lab 2 - Galaxies

As previously seen, galaxies are tremendous swarms of stars lying at very great distances, often measured in parsecs. <http://en.wikipedia.org/wiki/Parsec> A few galaxies have proper names such as Andromeda, or our Milky Way, while others have catalog names like Messier 31. [http://en.wikipedia.org/wiki/Messier\\_object](http://en.wikipedia.org/wiki/Messier_object)

Galaxies form in different galactic types or shapes, including elliptical, spiral, and irregular. <http://www.astro.cornell.edu/academics/courses/astro201/galaxies/types.htm> Some galaxies appear in groups or clusters. Galaxies can be further defined by their Hubble Sequence classification [http://en.wikipedia.org/wiki/Hubble\\_sequence](http://en.wikipedia.org/wiki/Hubble_sequence) which includes many sub-types.

### Objective

1) Image 4-8 galaxies [http://en.wikipedia.org/wiki/List\\_of\\_nearest\\_galaxies](http://en.wikipedia.org/wiki/List_of_nearest_galaxies) during this semester as possible, and identify their type and Hubble sequence classification. Also note their distance, magnitude, angular size, and location in the sky. Specific targets will be provided.

2) Load your final .fits images to DS9 (Lab 1) and experiment with image stretching, false color, and the astrometry functions. <http://en.wikipedia.org/wiki/Astrometry> What visual differences are there between galactic types, and between the inner and outer regions of various galaxies?