Step 2: Selecting Your Galaxies

The critical assumption

We want to **work only with spiral galaxies** (barred spirals will also be okay), and not elliptical galaxies. Why? Recall that if we see a galaxy that is 1/2 or 1/3 the angular (apparent) size of another galaxy, we would like to be able to state that that galaxy is 2 times or 3 times farther away. To do this, we must assume that if galaxies resemble each other, then they are approximately the same actual size.

We also want to choose galaxies that have similar spectral characteristics. As you review your classifications of the galaxies and your descriptions of the spectra, do you see any pattern or correlation? You should use this pattern or correlation in your decision to "keep or toss."

Selecting the Galaxies

In the last column of the galaxy and spectra overview table, mark down your decision to keep or toss that particular galaxy. You may toss up to 12 of the galaxies out of further consideration. You should plan to keep 15 galaxies to give you enough galaxies to work with in deriving the Hubble constant. **Once you eliminate a galaxy, you do not need to do anything more with that galaxy.**

Note: to make this task a bit faster, 5 galaxies have already been selected, and a few already eliminated. You will need to choose 10 more galaxies and eliminate the rest.

After your selection process is complete, answer this question for yourself: "Based upon these images, what do I foresee as possible problems in measuring the angular diameters of the galaxies?"