

Homework 5 Due April 20 2017

- 1) S+G problem 6.4
- 2) Why do we think that the formation of ellipticals is related to mergers.
- 3) Describe the Faber-Jackson relation and how it is connected to the fundamental plane?
- 4) problem 6.7 – is the increase in M/L supported by observations?
- 5) Is the shape of elliptical galaxies due to rotation? S+G Problem 6.5
- 6)
  - a) Why do we believe that elliptical galaxies are old- give 2 observations that support this idea.
  - b) What does this mean for the color of the galaxy and the nature of the stellar population?
  - c) How should the color and luminosity of an elliptical galaxy change over cosmic time and what do the observations tell us? (how does this connect with the answer you gave to parts (a and b)?)