

Exercises II

due on 27th Feb, 13.00 (after lecture)

1. Describe the main properties and structural components of an elliptical galaxy. Which key features might you expect to see in a spectrum ?
2. A spiral galaxy has a bulge component given by $\mu_0 = 15$ mags per sq arcsec, $R_b = 2$ arcsec, and an overall apparent magnitude of 18 mags. Calculate:
 - i) the magnitude of the bulge,
 - ii) the magnitude of the disk,
 - iii) the bulge-to-total light ratio,
 - iv) the galaxy type
3. Describe the different methods used to determine the star formation rate in Brinchmann et al. (2004). Suggest how accurate you think they are (make use of references).
4. Which mass galaxies have the strongest evolution in star formation rate over a Hubble time? And which dominate the star formation rate at the earliest times (see Panter et al. 2007).
5. How do the results of Blanton & Berlind (2007) compare to Dressler (1980)?

Paper presentation on 26th Feb, 12¹⁵-14
****look with a critical eye****

Week 2 (19th Feb) Detailed Galaxy Properties

Brinchmann* et al. (2004) MNRAS, 351, 1151

The Physical Properties of star-forming galaxies in the low-redshift Universe

Blanton & Berlind (2007) ApJ, 664, 791

What Aspects of Galaxy Environment matter?

Panter et al. (2007) MNRAS, 378, 1550

The star formation histories of galaxies in the Sloan Digital Sky Survey