Grading Rubric : ASTR400B Research Assignment 2

Name: [Gilles,Matthew Scott](https://github.com/matthewgilles/ASTR400B)

**A Introduction 10 / 10**

Each of the below points should be a separate paragraph in your introduction.

1. Define the Proposed Topic. 1/1
2. State why this topic matters to our understanding of galaxy evolution. 2/2
3. Overview our current understanding of the topic. 2/2
4. What are the open questions in the field? 2/2
5. Cite at least 3 journal papers. Use BibTex for formatting citations 1/1
6. Include at least one figure with caption from those papers to motivate your work. 2/2

**B. The Proposal 9/ 10**

They must answer each of the below questions as separate subsections.

1. What specific question(s) will you be addressing? 1/1
2. How will you approach the problem using the simulation data? Here you should outline the codes you’d need to write. It can be in general terms. 4/5
3. Include at least one figure that illustrates your methodology. 2/2
4. What is your hypothesis of what you will find? Why do you think this will occur? 2/2

**C. Misc. /5**

1. Proper Grammar 1/1
2. Included a bibliography 1/1
3. In Latex and ApJ/MNRAS formatting 2/2
4. On Time/On Github 1/1

**TOTAL** 24**/25**

**Late Penalty:**

* if submitted on due date, but after 5 PM  **(-5 points).**
* Proposals will **not be accepted** after the due date.

**Comments: -1 in methods:**

**Since this project is about the galaxy interaction sequence, you do not need to investigate the merger remnant itself. (so stop before the merger snapshot) If you decide to look at the merger remnant - how do you plan to do the fitting for the merger remnant ? Which particles will you consider ? Will you combine the particles of both galaxies ? Talk to us.**

**Remember that you do not have “luminosity” or “surface brightness” but rather “mass” and “surface density” – what does that mean about the mass-to-light ratio you need to assume?**

**You will need to fit sersic profiles of the bulge and the disk separately - but these have different forms . What is the sersic profile for a disk ? what is the appropriate profile for a bulge? what is the sersic index you would expect? What parameters do you need to fit for the profiles (e.g. effective radius, or scale length?, sersic index)**