Grading Rubric : ASTR400B Research Assignment 2

Name: [Mazziotti,Nicolas William](https://github.com/nmazziotti/astr_400b/tree/main)

**A Introduction 9/ 10**

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

1. Define the Proposed Topic. 0/1
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 /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** 23**/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: need to define the proposed topic in the first para of intro.**

**-1: contour fitting alone isn’t sufficient because you need to quantify the shape. You can fit ellipses to the contours or you can use the python library photutils . Talk to Himansh.**

**Doing this every 10 snapshots is a lot. Instead you can use the orbit of M33 about M31 to pick key points like just before closest approach (pericenter) or at farthest approach (apocenter) and that way you can relate changes in shape to the tidal forces applied by the larger galaxies.**

**For shape you will need to look at different planes because the shape can change depending on viewing projection (e.g. XY vs YZ vx XZ)**