Grading Rubric : ASTR400B Research Assignment 2

Name: [Hernandez,Aaron Baca](https://github.com/A-Mron/ABH_ASTR_400B_SP25)

**A Introduction 8.5/ 10**

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

1. Define the Proposed Topic. 0.5/1
2. State why this topic matters to our understanding of galaxy evolution. 1/2
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 10 / 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. 5/5
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? 1/2

**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** 23.5**/25**

**Late Penalty:**

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

**Comments:**

**-0.5: the first paragraph isn’t correct - the dynamics of the halo refers to understanding the velocities and orbits of dark matter particles that make up the halo. The halo is critical for forming a steep potential well in which baryons are collected (gas) to ultimately form a galaxy through star formation and the gravitational capture and merger with smaller objects.**

**-1 Be careful in the “why it matters” section - your proposal is about whether objects in orbit around the galaxies before infall remain bound to the merger remnant. you need to provide some background on why this question matters. You’re not really studying the kinematics of the halo - the escape speed is set by the mass profile of the dark matter distribution, not its kinematics. This question is important to understand the dynamical state of the objects in orbit around the remnant of a major merger. For your next draft you’ll need to rework the intro (come talk to Himansh or Dr Besla)**

**-1: you can compare the escape velocities you find with the speed of M33.**