

ASTR400B Research Assignment 1

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25 February 2025

The project I'm interested in is: **3. MW/M31 Galaxy Major Merger Remnant: Stellar remnant and formation of elliptical galaxies.** I am specifically interested in exploring these questions:

- Shape of the stellar remnant:
 - Is the remnant a spheroid or does it have some elongation/triaxiality?
 - How does this vary as a function of radius?
 - Is there substructure in the remnant?
- Stellar density profile of the merged bulges and disks:
 - How well is the remnant described as a classical elliptical galaxy based on its surface density profile?
 - What is the best fit sersic profile?