Research Assignment 1

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THE MW/M31 GALAXY MAJOR MERGER EVOLUTION

For this project, I'd like to explore the following questions about the evolution and result of the MW-M31 merger set to occur in ∼4 billion years:

1. What is the kinematic evolution of the bulges, disks, and halos of the MW/M31 galaxies?
    - Rotation curve evolution
    - Dispersion profile evolution
    - Angular momentum evolution
    - Density profile evolution
    - Do disk stars and bulge stars end up in different places within the remnant?
        - Where does the dark matter end up?
2. Are there galaxies in the field that appear or behave similarly to the MW-M31 remnant?
    - What about galaxy mergers in-progress like the MW-M31 merger in-progress?
    - This question may be a little harder to answer as it requires some research and comparison outside of the simulation, but I'd like to at least give it a shot.

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