

400B Research Assignment 1

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1 MW/M31 Dark Matter Halo Major Merger Remnant

- Is there any rotation/what is the evolution of the angular momentum? What is the velocity dispersion profile of the remnant and how does this compare to the original profile of each galaxy?
- What is the density profile of the combined MW + M31 halo? How does this compare to the original profile of each galaxy halo? How does this compare to a Hernquist profile or other dark matter profile (e.g. NFW, Isothermal Sphere)?
- What is the Shape of the Dark Matter Distribution of the remnant? Is it Triaxial? Oblate? Prolate?