

ASTR400B Research Assignment Topic

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1. Galaxy-Halo Connection

- (a) Does the merged remnant follow the Stellar Mass-Halo Mass relation?
- (b) How does the net angular momentum vector of the merged remnant halo compare to that of the stellar remnant? Is it aligned? How does this evolve? How does the alignment depend on the radius?

2. Galaxy Merger Sequence of MW and/or M31: stellar evolution through close encounters

- (a) How does the “observed” and mass-derived rotation curve of each galaxy evolve (disk + bulge)? (“observed” meaning plot the simulated disk particle line of sight velocity field edge on).

I listed the topics in the order of preference.