

Abstract Submitted
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Pre-Merger History of Illustris-Simulated Galaxy Pairs ALICE JACQUES, SPENCER SHORTT, KIERNAN REISING, DONOVAN DOMINGUE, Georgia College — In this work, we analyze the history of 24 simulated major-merger galaxies including star formation and mass growth with emphasis on morphological type dependencies. Pairs were identified as major-merger galaxy candidates (mass ratio <2.5) within the Illustris simulation; with the goal of comparing them to observations of SDSS-2MASS selected galaxy pairs and visually classifying their morphology. Approximately 7000 total galaxies fit within our mass range with 356 candidate pairs reduced by separation, mass, and relative velocity criteria to a final sample of 24 simulated physical pairs at various stages of pre-merger galaxy interaction. Illustris masses and star formation are presented across the simulation snapshots in an effort to understand the pre-paired history of observationally selected analogs.

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