

Abstract Submitted
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Galaxy Evolution Through Mutual Interactions ROBERT BERRINGTON, Ball State University — The hierarchical structure formation model predicts that a galaxy will be found in different environments throughout its evolutionary history. How each environment will, through numerous mechanisms, impact the structural and dynamical evolution of its constituent galaxies is unknown. We present numerous N-body simulations to investigate the change in mass, energy and structure of galaxies through mutual interactions. We discuss our investigation into the dependency of the mass and energy change with galaxy structural parameters resulting from these mutual interactions. It is our intent to characterize the effects of mutual interactions on galaxy structural parameters and thereby isolate from the effects resulting from the cluster environment. We suggest that these models can be used to look for secular trends in the observational properties of elliptical galaxies in clusters of galaxies. We discuss the preliminary results of these models, and future directions of this study.

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