

Nature and Nurture in Galaxy Formation Simulations

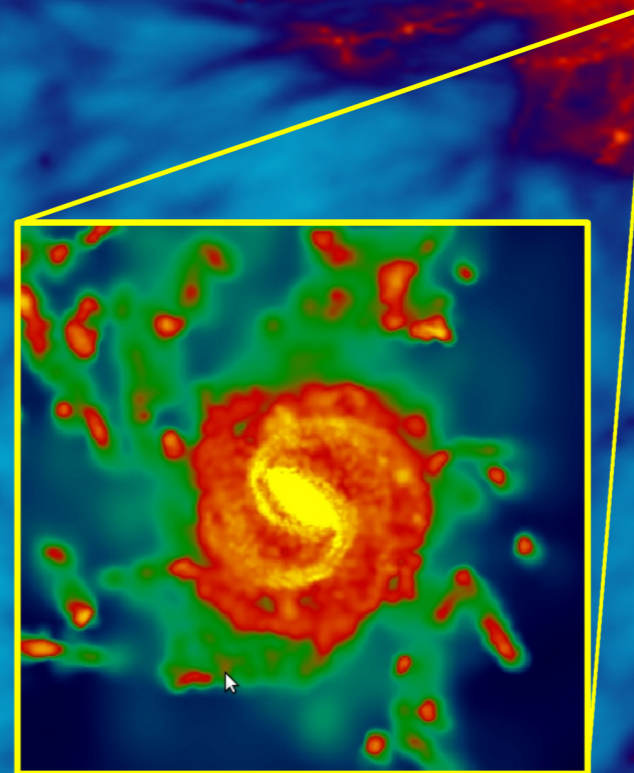
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The evolution of galaxies is one of the most active fields of research in astrophysics these days. Observationally, theoretically as well as numerically many studies are published on a daily basis. In this thesis we take the approach of analyzing a large suite of simulations, drawn from the Overwhelmingly Large Simulations project, from the online available galaxy catalogs build on the Millennium Simulations, as well as some Monte Carlo Simulations, in order to investigate a number of issues regarding the evolution of galaxies over time.

With 'nature and nurture' we generally mean the distinction between internal and external processes, respectively, that affect galaxy evolution. The internal processes are e.g. small-scale phenomena like star formation, supernova explosions and the presence of Active Galactic Nuclei. The density of galaxies in the neighbourhood, the tidal fields of neighbours acting on galaxies and the interaction between galaxies when come near one another are examples of external processes. Both are given attention in this thesis.



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