

Abstract Submitted
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Ultra-diffuse galaxy evolution in simulations LOUIS PENAFIEL,
LAURA SALES, Univ of California - Riverside — We present the study of the evolution of ultra-diffuse galaxy (UDG) properties in the Illustris cosmological simulation. UDGs have stellar masses and appearances similar to dwarf galaxies, but have sizes comparable to Milky Way galaxies, making them have extremely low surface brightnesses. We explore a scenario where the evolution can be attributed to tidal disruption, where most of their mass was stripped as they infall to a central galaxy cluster. We study the evolution of their masses, half-mass radii, and surface brightnesses. We make predictions on the infall times and present day distribution and kinematics that can be compared to future observations.

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