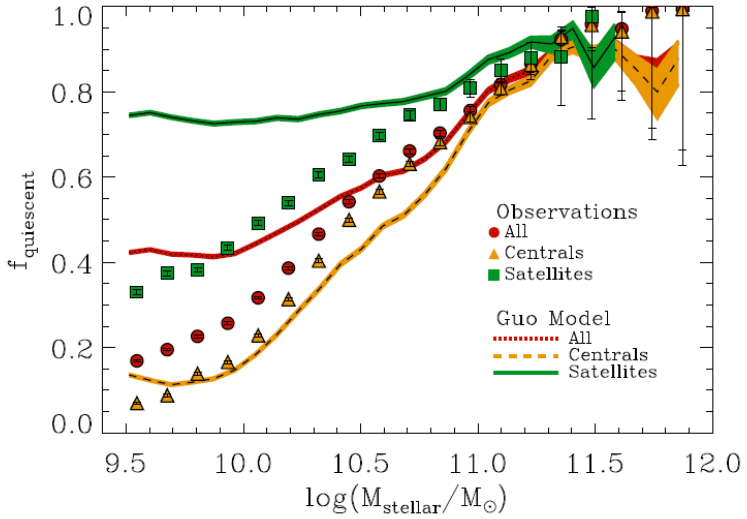
Devontae Baxter

Physics Graduate at UC Irvine

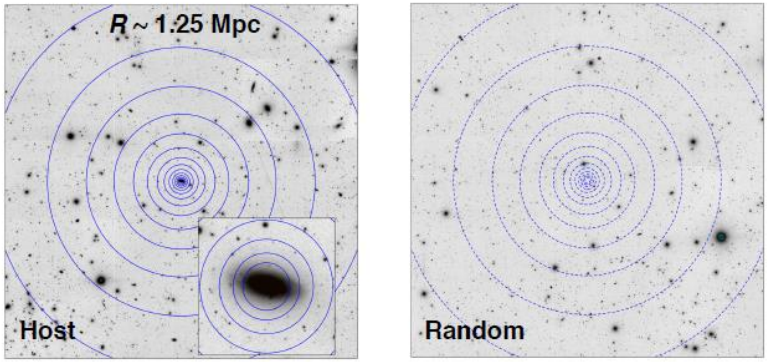
Research: I study the suppression of star-formation in satellite galaxies in the local universe and at higher redshifts (earlier times) using observational and simulated data.



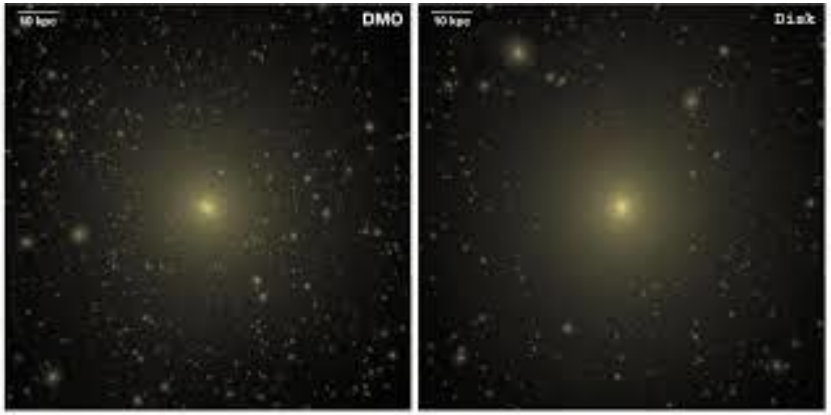
Guo et al.

Questions to answer: Which physical processes are involved in shutting down star-formation in satellite galaxies? Are the processes internal or external? What is the quiescent fraction for low-mass satellite galaxies?

Observational (imaging) data



Simulated data



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Some of my computational challenges include handling and analyzing large observational and simulated datasets.

Classification: Classify photometrically observed galaxies as star-forming or quenched to ultimately explore the quiescent fraction of low-mass satellites galaxies.

Regression: Use observable quantities from simulations in conjunction with ML models obtain difficult to derive quantities relevant to the suppression of star-formation (e.g. infall-time).

SDSC goals: Learn more about machine learning, performance optimization and supercomputing with the goal of eventually running my own simulations.