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Stellar Populations of Shells and Streams - Where They Came from and How They Got There

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Tidal features in the outskirts of galaxies detected by low surface brightness observations provide a unique pathway to study their assembly history. The upcoming Vera C. Rubin Observatory will provide a vast number of galaxies exhibiting such features, while integral field unit observations enable the study of their stellar population properties. I employ the hydrodynamical cosmological simulation *Magneticum Pathfinder* to study the stellar properties of shells and streams. Tracing the stellar particles of tidal features back in time allows me to identify the progenitor satellite galaxies and connect their properties to the tidal feature they formed. I will present spatially resolved maps of the stellar velocity dispersion, mass, age, and metallicity in galaxies exhibiting shells and streams as well as the behavior of these properties within the tidal features themselves. I find that shells and streams generally appear as depressions in the velocity dispersion, while only some streams and shells appear younger and more metal rich than their surroundings. Furthermore, I will discuss the connection between these properties and the radial velocity fraction, gas and stellar mass, and the depth of the gravitational potential of the features' progenitor satellite galaxies. Finally, I will compare the spatial extent and orientation of the feature to the half-mass radius and the orbit of the progenitor.

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