The Dynamics of Galactic Satellites: Links to Galaxy Formation

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Abstract: The Milky Way's satellites and their stellar streams are archaeological probes of galaxy formation and cosmology. The orbits of dwarf galaxies aid us in understanding the formation and evolution of dwarf spheroidal galaxies. We use satellite orbits in a high resolution cosmological simulation to evaluate the effects of a time varying triaxial Galactic potential, satellite-satellite interactions as well as dynamical friction and mass loss on the orbital recovery from present day phase space coordinates.

Cold tidal streams should approximately trace the orbit of their progenitor and therefore constrain the mass and shape of the Galaxy. Benefiting from the wealth of newly detected cold streams, we assess how well the Milky Way potential can be constrained with current and future kinematics data.

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