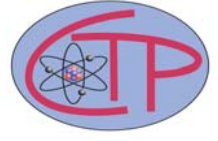




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# Cuspy No More: How Gas Outflows Alter the Baryon and Dark Matter Distribution at the Center of Galaxies



## Abstract

I will show results from cosmological simulations of galaxy formation that include a realistic treatment of Supernovae and Super Massive Black Holes energy feedback. As energy couples to the interstellar medium, rapid gas outflows remove low angular momentum baryons from galaxies and create fluctuations in the global potential that irreversibly transfer energy to the underlying Dark Matter distribution. Small, repeated gas outflows as observed in local and high redshift galaxies simultaneously solve three long-lasting problems in galaxy formation: the substructure overabundance, the existence of bulgeless galaxies, and the presence of ubiquitous Dark Matter 'cores' at the center of galaxies. I will then briefly discuss how these results are going to shape possible observational tests for alternative models to Cold Dark Matter.