

Resolving Dark Matter Tension: The impact of dynamical friction due to fuzzy dark matter on satellites with triaxial and logarithmic potentials

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A possible candidate for dark matter is an ultralight bosonic particle comprising the Fuzzy Dark Matter (FDM). The presence of FDM in a galactic cluster will impact the motion of satellites residing in such clusters, through dynamical friction. Here we present numerical simulations of the dynamical friction on satellites traversing an initially uniform FDM halo. The potentials of the satellites we have studied are triaxial and logarithmic. We find that the wakes created on the FDM halo due to the passage of such satellites are qualitatively different from those generated by spherically symmetric systems and we quantify the impact of fuzzy dark matter on the dynamical friction coefficient of the satellites.

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