

Cosmological Zoom-in simulations of Fuzzy Dark Matter dwarf halos in the field

Friday 14 November 2025 14:00 (20 minutes)

Ultra-light bosons are a promising candidate for the dark matter in the Universe. The quantum nature implies minimum halo mass scale below which structure formation is suppressed. The limited number of Self-consistent FDM simulations have reveal that non-linear collapse can yield soliton formation below the Jeans scale. In this talk, I will present a suite of FDM cosmological zoom-in simulations of dwarf mass halos in the field for various boson masses. I will show how these results can inform about the formation of the smallest scales and how that impacts the soliton core-halo mass relation.

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