



## Cosmology with Fuzzy Dark Matter Model

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### Abstract

Fuzzy Dark Matter (FDM) is made up of ultralight bosons with mass around  $\sim 1e-22eV$ . It is proposed to solve the small scale problems of the cold dark matter while mimicking the CDM on the large scale. The dynamics of FDM is governed by the Schrodinger-Poisson equation. The wave nature of FDM exhibits novel phenomena including density fluctuations, formation of vortices and filaments, and oscillation of the soliton core at the halo centre. They can be used to observationally probe and constrain the FDM model through gravitational lensing and stellar dynamics.

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