

The Quantum Character of the Scalar Field Dark Matter Tonatiuh Matos

In the last time, the Scalar Field Dark Matter (SFDM), also called ultralight dark matter, has received much attention because it gives a natural explanation for the core-cusp and the satellite problems of Cold Dark Matter (CDM). In this talk we show that from the quantum character of this model follows that the dark matter halos of galaxies should have an atom like density profile, implying that there is a dark matter concentration away of the center, that causes that barionic matter tends to move around the poles of the galaxy instead of follow arbitrary orbits. This phenomenon is a prediction of the SFDM and has recently been observed in near galaxies.