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Contribution ID: 2877 Type: **Poster Competition (Graduate Student) / Compétition affiches (Étudiant(e) 2e ou 3e cycle)**

80 - The Axion Quark Nugget Dark Matter Model: Size Distribution and Survival Pattern

Tuesday 4 June 2019 17:27 (2 minutes)

We consider the formation and evolution of Axion Quark Nugget dark matter particles in the early universe. The goal of this work is to estimate the mass distribution of these objects and assess their ability to form and survive to the present day. We argue that this model allows a broad range of parameter space in which the AQN may account for the observed dark matter mass density, naturally explains a similarity between the “dark” and “visible” components, i.e. $\Omega_{\text{dark}} \sim \Omega_{\text{visible}}$, and also offer an explanation for a number of other long standing puzzles such as “Primordial Lithium Puzzle” and “the Solar Corona Mystery” among many other cosmological puzzles.

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