

Cantor Dust as Underlying Texture of Fuzzy Dark Matter

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A close connection exists between the recently advanced concept of Fuzzy Dark Matter and Cantor Dust, a dimensional condensate created from the minimal fractal structure of spacetime near or above the Fermi scale.

Key Words: Fuzzy Dark Matter, Cantor Dust, minimal fractal manifold.

The exceedingly brief note is a sequel to [1-3]. It points out that recent simulations on galaxy formation from ultralight “fuzzy” dark matter components (FDM) [4-5] are fully consistent with the Cantor Dust model of spacetime condensation, as introduced earlier in [2, 6-8].

References

[1] <https://www.prespacetime.com/index.php/pst/article/view/1563/1491>

[2] <https://www.prespacetime.com/index.php/pst/article/view/959/933>

[3] Available at the following site:

https://www.researchgate.net/publication/329698623_Diffusion_Limited_Aggregation_and_the_Spiderweb_Distribution_of_Dark_Matter_on_Galactic_Scales

[4] <https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.123.141301>

[5] <https://ncatlab.org/nlab/show/fuzzy+dark+matter>

[6] <http://fs.unm.edu/PP-15-02.pdf>

[7] Goldfain E., “*Introduction to Fractional Field Theory*”, (2015), Aracne Editrice. A draft copy of this reference may be located at:

https://www.researchgate.net/publication/278849474_Introduction_to_Fractional_Field_Theory_%28consolidated_version%29

[8] Available at the following site:

<https://www.ingentaconnect.com/content/asp/qm/2013/00000003/00000003/art00012>