The Early Universe's lack of Dark Matter Explained Using Cyclic Universe E8 Symmetry Theory

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Abstract: The early universe's deficit of dark matter is simply explained using up-to-date theory: dark matter entered new recycled active galaxies at their supermassive black holes at an overall steady rate that has continued unchanged to the present day.

According to cyclic universe E8 symmetry theory, dark matter negative intrinsic energy H and Z particles each have entered the new universe at a rate[1] of one per second per active galaxy near or at the supermassive black holes and this has continued unchanged to the present day. The dark matter H particles have spin 0 and thus are immobile and are trapped in the black holes quickly (and cause the black holes to be supermassive).

The Z-particle dark matter (with spin 1) is very mobile and escapes the black hole vicinity quickly, leaving tell-tale[2] "bars" in the galaxy as clues to its past activity.

We first find the mass density (intrinsic energy density) of various sorts for the universe today[3]. This is

1. Fermionic matter density of matter transferred from the previous universe = 1.6998599 x 10^-27 Kg/M^3 = Z- particle dark matter density.

2. The density equivalent of annihilation gamma radiation, which is 2.520981772 x 10^-27 Kg/M^3.

3. The density equivalent of positive energy returned to supermassive black holes as +H particles in our epoch, 2.3301072 x 10^-27 Kg/M^3.

We next find the same particle mass densities 10 billion years ago (3.8 By after the big bang) = 3.8 /13.8 = 0.2753623. Apply this same factor to all 3 densities above. Transferred Fermionic matter density = dark matter density = 0.4680773 Kg/M^3. Annihilation radiation equivalent density =0.6941833 Kg/M^3.
Density equivalent +H particles to supermassive black holes = 0.6416236 Kg/M^3.

We now find the ratio of total non-dark matter to dark matter today vs. 10 billion years ago. Today it is 6.3600743/1.6998599 = 3.74 vs. 1.734987/0.4680773 = 3.74 also. Thus the ratio remains unchanged as expected, but the total amount of dark matter has increased by x 3.63 today

1. George R. Briggs, “The successful yet highly anthropic cyclic universe of E8 symmetry theory updated: the role of the 8 supersymmetric entities of life”, viXra 1702.0337, (2017)

2. George R. Briggs, “Mono-X particles appear in nature as spiral galaxy bars”, viXra 1607.0064, (2016)

3. George R. Briggs, “The latest value of the Hubble constant indicates a universe matter density higher than one hydrogen atom per cubic meter”, viXra 1704.0404, (2017)