The Dirac Large Numbers Hypothesis

1.0 Abstract

This paper is the start of showing that the Dirac large number hypothesis is missing a certain a missing dimensionless number and this dimensionless number converts to describing a neutron like particle that builds the universe. In earlier papers by Michael John Sarnowski it is called the Planck Sphere.

The Dirac large numbers hypothesis (LNH) is an observation made by Paul Dirac in 1937 relating ratios of size scales in the Universe to that of force scales. The ratios constitute very large, dimensionless numbers: some 40 orders of magnitude in the present cosmological epoch. According to Dirac's hypothesis, the apparent similarity of these ratios might not be a mere coincidence but instead could imply a cosmology with these unusual features:[1]

In this paper we show the start of the Large Numbers Hypothesis, but we find that the numbers that have been used aren't quite correct, and if the correct number is used we can find what the Planck units are really referring to.

2.0 Calculations

The value for the large number is calculated from calculations in the Proton Electron Universe[2].

$$U = N^{0.5} = [\frac{2M_P \pi^3 hc}{GM_N^3}]^{.5} \text{[2]} \qquad [1]$$

$$U = (6.57014(31) * 10^{40})^{.5}$$

U=2.56323*10^20 [1]

This equation is modified from "Evidence for Granular Spacetime" developed by Michael John Sarnowski. This number, "U" and its multiples, points to the neutron, proton, and electron as a guide to the structure of the universe

2.0 Calculations

$$U = N^{0.5} = [\frac{2M_P \pi^3 hc}{GM_N^3}]^{.5} \qquad [1]$$

$$E = \frac{3kT}{2} \qquad [2]$$

$$E = M_N c^2 \qquad [3]$$

$$M_N c^2 = \frac{3kT_2}{2} \qquad [4]$$

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Planck Temperature= $P_T = [\frac{hc^5}{Gk^2}]^{.5}$ [5]

If we take the Planck Temperature and divide by U, the proposed Dirac Large Number hypothesis we have the following equation which I propose as a maximum temperature.

$$T_1 = \frac{P_T}{U} = \frac{[\frac{hc^5}{Gk^2}]^{.5}}{[\frac{2M_P\pi^3 hc}{GM_N^3}]^{.5}} 1385522511228 \text{ Degrees Kelvin} \quad [6]$$

If I take the following Equation

$$M_N c^2 = \frac{3kT_2}{2}$$

$$T_2 = \frac{2M_N c^2}{3k} = 7268805042768 \text{ Degrees Kelvin}$$

These two values are equal with geometric adjustments.

$$\frac{T_1}{T_2} = \frac{1385522511228 * [2pi]^{0.5} * 2\frac{pi}{3}}{7268805042768} [\frac{M_P}{M_N}]^{0.5} = 1 \quad \text{exactly}$$

These numbers are just geometric factors that are included in the original derivation of the value of “U” in Equation 1.

3.0 Discussion

The value “U” is now the new proposed Dirac Large numbers hypothesis number. It will be shown in a general paper how the Value “U” converts all Planck units to values that are centered around the neutron.

Since the Planck temperature divided by U gives a value that is the same for the rest mass obtained temperature of the neutron, it may indicate that there is a maximum temperature in the universe and that temperature is not relativistic.

So Dirac’s Large Numbers Hypothesis might be correct, but instead of a large number N, the value may be a large number U that is the square root of N.

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References

[1] https://en.wikipedia.org/wiki/Dirac_large_numbers_hypothesis

[2] http://vixra.org/pdf/1804.0033v1.pdf