1.0 Abstract

What is the mathematical basis for the construction of the universe? This paper intends to show a start of how the universe is constructed. It also answers the question, did the hand of God build the universe? This paper shows how, mathematically, the universe could start from a single point and then is built up into the universe and the multiverse.

2.0 Calculations

If one starts with a point and call this point one, it would in a sense, be a zerodimensional spot. If this spot were spinning it would have an angular momentum. One finds that the angular momentum in guantum physics to be as follows.

$$|S| = \hbar (s(s+1))^{0.5}$$
[1]

If we square both sides of the Equation 1, we end up with

$$s_2 = \frac{|S|^2}{\hbar^2} = s(s+1)$$
[2]

If we say that the original value of s is 1, which is our point there is no spin that can be associated with one point since there is no reference to a difference. Therefor spin only makes sense when there are two particles. Note that two particles make a line and thus we have a one dimensional object.

When s=1 then $\frac{|S|^2}{\hbar^2} = 2$ a dimensionless number. If this value of $\frac{|S|^2}{\hbar^2} = 2 = s_2$ and

we substitute

$$s_3 = \frac{|S_2|^2}{\hbar^2} = s_2(s_2 + 1)$$
[3]

this new value of s_2 into equation 2 then we obtain a new value of $s_3 = \frac{|S_2|^2}{\hbar^2} = 6$

this value of $s_3 = 6$ could be a 6-sided ring with a particle in the middle for a total of 7 particles and therefore be a unit two-dimensional object.

If we take this equation 2 and substitute the value of $s_3 = 6$

$$s_4 = \frac{|S_3|^2}{\hbar^2} = s_3(s_3 + 1)$$
[4]

this new value of s_3 into equation 2 then we obtain a new value of $s_4 = \frac{|S_3|^2}{\hbar^2} = 42$

this value of $s_4 = 42$ could be a 42-piece exterior to a cuboctahedron packed spheres with a total of 55 spheres or particles and therefore be a unit three-dimensional object.

At this point it appears that there is, in a sense, a phase change. Instead of continuing to be packed perfectly these points are packed into a spherical structure being constrained by a gravitational field, yet wanting to be packed efficiently as cuboctahedrons.

It was shown in "The Holographic Principle and How can the Particles and Universe be Modeled as a Hollow Sphere"[1] that when packing spheres into a spherical structure that the amount of discontinuities made would be equivalent to the amount of spheres on the outer layer of the sphere. The equation for this.

$$s_d = 4\pi (n+1)n \tag{5}$$

Which is very close to the equation 1 for the angular spin momentum squared of a quantum particle. This seems unlikely to be a coincidence.

It was found in "The Answer to the Universe, the Life and Everything is Still 42"[2]

That the values of outer layers of the next layers of the construction of the universe is as follows.

$$\frac{4}{3^{0.5}} * N * \frac{1}{\frac{Mp}{Mn} - \frac{Me}{Mn}} = X^2 + X$$
 [6]

We can put this equation into the form of Equation 2 where $N = \frac{|S_4|^2}{\hbar^2}$

$$s_5 = \left[\frac{Mp}{Mn} - \frac{Me}{Mn}\right] \frac{3^{0.5}}{4} s_4(s_4 + 1)$$
^[7]

The values for $\frac{Mp}{Mn} = 0.99862347844$ and $\frac{Me}{Mn} = 0.00054386734428$ will be used from CODATA. With $\frac{Mp}{Mn} - \frac{Me}{Mn} = 0.998079611096$

$$s_5 = \left[\frac{Mp}{Mn} - \frac{Me}{Mn}\right]\frac{3^{0.5}}{4}42(42+1)$$

$$s_6 = \left[\frac{Mp}{Mn} - \frac{Me}{Mn}\right] \frac{3^{0.5}}{4} 780.519155281992(780.519155281992+1)$$

 $s_6 = 263626.469099857$

 $s_5 = 780.519155281992$

 $s_7 = \frac{3^{0.5}}{4} 263626.469099857(263626.469099857+1)$ $s_7 = 30036234971.3611$

$$s_8 = \left[\frac{Mp}{Mn} - \frac{Me}{Mn}\right]\frac{3^{0.5}}{4} 30036234971.3611(30036234971.3611+1)$$

 $s_8 = 3.89903205942545133644105100574700*10^{20}$

$$s_{9} = \left[\frac{Mp}{Mn} - \frac{Me}{Mn}\right] \frac{3^{0.5}}{4} 3.899032059425 \times 10^{20} (3.899032059425 \times 10^{20} + 1)$$

$$s_{9} = 6.5702127425 \times 10^{40}$$

Note that this level of $s_9 = 6.5702127425 * 10^{40}$ is the level of the Planck Sphere which is described in the paper "Evidence for Granular Spacetime" [3] The Planck Sphere is the Sphere that if filling our universe, mostly packed in a Cuboctahedron Structure, but is forced into a sphere, by the force of mass and kinetic energy.

The next level is a sphere that has a value that is the amount of Planck Spheres on the outer layer of our Hubble Sphere. This is

$$s_{10} = \left[\frac{Mp}{Mn} - \frac{Me}{Mn}\right]\frac{3^{0.5}}{4}6.5702127425*10^{40}(6.5702127425*10^{40}+1)$$

 $s_{10} = 1.86562643 * 10^{81}$ particles for the Hubble Sphere.

These same calculations can be extended to calculate the amount of Hubble Spheres that are on the outside of the Multiverse. There may also be multiple Multiverses, but the author has not found a mathematical limit to the Hand of God. The author believes, that in addition to the cuboctahedron base unit to the construction of the universe that there are 9 additional layers which would mean that there would also be multiple Multiverses. The reason for this is that when calculating the proton neutron mass ratio in the paper "An Electro Magnetic Resonance in 9 Dimensions that gives Mass Ratio of

Proton to Neutron" [4] needed 9 dimensions to get the mass ratio of the proton to the neutron and these ratios are used in building the layers of spheres made of spheres.

The difference between this model of a rotating universe and the big bang universe is that the kinetic energy of expansion verses rotation is different. An expanding universe, from the big bang yields about $1.047 * 10^{80}$ particles, which comes from the critical density of the universe for a Hubble Sphere sized universe.

Nparticles of the Universe =
$$\frac{3h^2c^2\pi^3}{G^2Mn^4}$$
 = 1.047164142*10⁸⁰ protons and electrons

It should be noted that a rotating sphere would change the amount of dark energy and also slightly change the size of the Hubble Sphere. It is not calculated here, but it will be mentioned that the

The values for s_5 , s_6 , s_7 , s_8 , s_9 , s_{10} , will be calculated.

2.0 Discussion

Quickly, the answer to whether God built the universe is this. God building the universe, is a belief, we have found no way to prove this. It is a faith. The universe arising from nothing, is a belief, we have found no way to prove this, it is a faith. So those who believe in God or no God, have a belief, both systems of thought are both a faith in the unknown. My own personal faith, is that there is a creator or creators, that made the universe. The only reason I believe this is that it seems the universe is just too darn useful to have been an accident. Other than this reason, I have no insights into what God is.

References

- 1) <u>http://vixra.org/pdf/1601.0103v1.pdf</u>
- 2) http://vixra.org/pdf/1804.0043v1.pdf
- 3) http://vixra.org/pdf/1601.0234v6.pdf
- 4) http://vixra.org/pdf/1612.0302v3.pdf