1.0 Abstract

Sphere Theory is a theory of granular spacetime. In Sphere theory the mass ratios of the electron to the neutron, the proton to the neutron, and the fine structure can be directly estimated using Sphere Theory's unification of gravity and charge, and using a resonance of radiation similar to Bremsstrahlung Cherenkov Radiation. The values of the ratios calculated by these methods are as follows. The mass ratio of the electron to the neutron, Me/Mn = 5.438673444242 *10^-4. The mass ratio of the proton to the neutron, Mp/Mn=0.9986234786761 and the Sommerfeld fine structure constant Alpha=137.035999097020 (1). In this paper we use the values of Me/Mn (2), Mp/Mn (3), and Alpha, Sommerfeld fine structure constant, (4) determined from Sphere Theory to calculate the Planck Constant from each CODATA publication year, and compare it to the CODATA value of the Planck constant. These calculations may show that Sphere Theory is useful for making sense of the universe.

2.0 The Equation for Planck's Constant

We found from Sphere Theory's "Evidence for Granulated, Granular Topological Spacetime" by Michael John Sarnowski (5) that the following equation for the Sommerfeld fine structure constant σ.

$$\sigma = \frac{1}{\sqrt{1-(\frac{\pi Me}{3*3Mn})^2}} T\pi^3 \frac{Me}{4Mn} \quad [1]$$

$$\sigma^{-1} = 137.035999097020$$

Where

$$T^2 = (\frac{Mp-Me}{Mn})^2 + (\frac{Mn}{Mn})^2 + (\frac{Mn}{Mn})^2] \quad [2]$$

$$T = 1.73094278087281$$

The equation for the Planck Constant is as follows.

$$h = \frac{q^2 c\mu}{2\sigma} \quad [3]$$

Where h=planck constant, q=elementary charge, μ=magnetic constant permittivity, c=speed of light, and σ=sommerfeld fine structure constant.

The following table shows the values of the Planck constant calculated from equation 1 above determined by Sphere Theory.

2.0 Calculation of Planck Constant

The following data below, is the calculation of the Planck constant using Equation 3, calculated with the elementary charge and speed of light for that respective year, then compared to the CODATA value for the Planck constant for that respective year. On the far right side of the equation, the how many sigma the calculated value from equation 3 is to the CODATA Planck constant for that respective CODATA year.

CODATA year	**Planck Constant Equation 3**	**Planck Constant CODATA**	**How close is Equation 3 to CODATA Planck Constant**
1969	6.62619569185E-34	6.626186(57)E-34	**0.18 sigma**
1973	6.62617408502E-34	6.626176(38)E-34	**0.05 sigma**
1986	6.62607590386E-34	6.6260755(40)E-34	**0.1 sigma**
1998	6.62606872434E-34	6.62606876(52)E-34	**0.07 sigma**
2002	6.62606928679E-34	6.6260693(11)E-34	**0.01 sigma**
2006	6.62606893113E-34	6.62606896(33)E-34	**0.09 sigma**
2010	6.62606957629E-34	6.62606957(29)E-34	**0.02 sigma**
2014	6.62607003783E-34	6.626070040(81)E-34	**0.03 sigma**

Table 3 Planck constant table.

3.0 Discussion

The predicted values of Planck's Constant are close to the limits of the CODATA value. Although this does not prove Sphere Theory, the values predicted leave open the possibility. The value in Equation 2 is empirical. There have been many attempts at numerology to determine fundamental physical constants. This is looked at with contempt by many scientists. When in truth, most of physics is a combination of data, theoretical physics, statistics, creativity, model making, guess work, opportunity, hard work, and luck. As the measurements accepted by CODATA become more precise, these measurements can be compared to Sphere Theory's prediction for Sommerfeld fine structure constant, von Klitzing constant, mass ratio of the proton to the neutron, and mass ratio of the electron to the neutron found in "Prediction of Mass Ratios of Particles, Sommerfeld Fine Structure Constant, and the von Klitzing Constant" (6)

4.0 References

1 http://vixra.org/pdf/1611.0364v5.pdf
2 http://vixra.org/pdf/1612.0068v4.pdf
3 http://vixra.org/pdf/1612.0302v3.pdf
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