1.0 Abstract

It is becoming clear, that experimental physics will not be enough to develop the model for the construction of the Universe. Statistical Probability will be necessary for developing the model and proving the model. The equations in this paper predict a value for the Planck Constant, from other fundamental constant for each Codata year since 1969. The data below shows a calculating equation that predicts a Planck constant within 0.2 sigma of the actual Codata value for the Planck constant over six publications of Codata in a row, since 1986. The data below shows a calculating equation that predicts a Planck constant consistently nearly equal to the actual Codata value for the Planck constant over all eight publications of Codata in a row, since 1973. To randomly generate an equation to do this, when the data has become more accurate by a factor of 700 times over this time period, is highly unlikely, perhaps as unlikely as one out of a 100000. In addition, Equation 2, below, predicted a more accurate Planck constant, than the Codata value of the respective Codata publication. This again is unlikely, but not unheard of. The sum of these data show that the mechanism for determining the Planck constant, may be mirroring the calculations, and may be measuring the same phenomena. Data for 2018 CODATA are included. The value calculated using spinning sphere theory, of $6.6260701507*10^{-34}$ continues to be compatible with the CODATA value of $6.62607015*10^{-34}$.

2.0 The Equation for Planck's Constant

We found from "Discrete Calculations of Charge and Gravity with Planck Spinning Spheres and Kaluza Spinning Spheres", Michael John Sarnowski (8) that the following equation for q,

$$q^2 = T\pi^3 hc\varepsilon \frac{Me}{2Mn} \qquad [1]$$

modeled Discrete unit charge. We can rearrange the equation for elementary charge and solve for the Planck constant.

$$h = \frac{2Mnq^2}{MeT\pi^3 c\varepsilon} \qquad [2]$$

Note the following

$$T^2 = \frac{1}{\sqrt{1-(\frac{\pi 2^{0.5} Me}{3*3Mn})^2}}[(\frac{Mp-Me}{Mn})^2 + (\frac{Mn}{Mn})^2 + (\frac{Mn}{Mn})^2] \qquad [3]$$

$$T = 1.00000001802066*1.7309427808440$$

$$T = 1.730942812036$$

Equations 1-3 Where h=planck's constant, c=speed of light in a vacuum, Mn=rest mass of the neutron, Mp=rest mass of the proton, and Me=rest mass of the electron, q=elementary charge, and Ɛ=dielectric permittivity. T is defined in Equation 3

3.0 Calculation of Planck Constant

The following data below, is the calculation of the Planck constant using Equation 2, 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 2 is to the Codata Planck constant for that respective Codata year.

Codata year	Planck Constant Equation 2	Planck Constant Codata(3)	How close is Equation 2 to Codata Planck Constant
1969	6.626041E-34	6.626186(57)E-34	2.54 sigma
1973	6.626171E-34	6.626176(38)E-34	0.131 sigma
1986	6.6260758E-34	6.6260755(40)E-34	0.075 sigma
1998	6.62606870E-34	6.62606876(52)E-34	0.12 sigma
2002	6.6260693E-34	6.6260693(11)E-34	0.00 sigma
2006	6.62606893E-34	6.62606896(33)E-34	0.09 sigma
2010	6.62606958E-34	6.62606957(29)E-34	0.03 sigma
2014	6.626070040E-34	6.626070040(81)E-34	0.00 sigma
2018	6.6260701507*10^-34	6.62607015E-34	Not applicable

Table 3 Planck constant table.

It seems the chance of a values being so close to zero sigma from the Codata Planck value seems slim. For the year1969, more accurate ratios of the mass of the electron to the neutron would have made all the difference in predicting a better Planck constant, never the less, Equation 1 predicted a better value, than the measured values. In fact Equation 2 predicted a better value for the Planck constant in all years but 1986 and 2006.

$$h = \frac{T^2 \pi^6 c M e^3}{32 M n^2 R} \qquad [5]$$

Codata year	Planck Constant Equation 5	Planck Constant Codata(3)	How close is Equation 5 to Codata Planck Constant
1969	6.626507E-34	6.626186(57)E-34	5.63 sigma
1973	6.6261856E-34	6.626176(38)E-34	0.25 sigma
1986	6.6260747E-34	6.6260755(40)E-34	0.2 sigma
1998	6.62606886E-34	6.62606876(52)E-34	0.19 sigma
2002	6.6260694E-34	6.6260693(11)E-34	0.09 sigma
2006	6.62606902E-34	6.62606896(33)E-34	0.18 sigma
2010	6.62606958E-34	6.62606957(29)E-34	0.07 sigma
2014	6.626070040E-34	6.626070040(81)E-34	0.00 sigma
2018	6.6260701485E-34	6.62607015E-34	Not applicable

Table 1(7)

4.0 Prediction for Elementary charge. If equation 2 and equation 5 are both correct and the fine structure constant is defined as

$$\frac{1}{\alpha}=\frac{2hc\varepsilon}{2q^2}. \qquad [6]$$

Then some predictions could be made about elementary charge, the mass ratio's of elementary particles, or Planck's constant.

5.0 Discussion

The predicted values of Planck's Constant close are close to the limits of the Codata value. Although this does not prove that Equation 2 is correct, the values predicted leave open the possibility that the, Equation 2, could be correct. 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. The statistical probability of Equation 2 or Equation 5 yielding the above results is probably a combination of the previous sentence.

6.0 References

1 http://vixra.org/pdf/1407.0148v2.pdf
2 http://vixra.org/abs/1507.0128
3 http://physics.nist.gov/cuu/Constants/index.html
4 http://vixra.org/pdf/1502.0193v2.pdf
5 http://physics.nist.gov/cgi-bin/cuu/Value?e
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