Prediction for the Sommerfeld Fine-Structure

1.0 Abstract:

The following paper is a prediction for a more precise value for the Sommerfeld Fine-Structure Constant, of 137.035999098, and the mass ratios of the Electron and Proton to the Neutron. In the following papers by Michael John Sarnowski , "Serendipitous Hints at Shape of Electron and Electron/Neutron Mass Ratio" @ http://vixra.org/pdf/1508.0027v4.pdf and "Evidence for Granulated, Granular Topological Spacetime" @ http://vixra.org/pdf/1601.0234v2.pdf and "An Electro Magnetic Resonance in 9 Dimensions that gives Mass Ratio of Proton to Neutron" @ http://vixra.org/pdf/1612.0302v1.pdf .
He has worked to develop a model for the structure of the universe. This model is developed empirically from the fundamental constants and the laws of force of physics. It is a model that tries to be the start of a Theory of Everything that proposes a granular space-time that is almost discrete and almost continuous. Gravity and Charge are united under one structure. Elementary charge is determine to be a function of the fundamental constants and the ratios of the proton mass to the neutron mass and the electron to the neutron mass. This paper takes the theories of Michael John Sarnowski and proposes a mass ratio of the proton to the neutron and proposes a value for the fine structure constant that is more accurate than the current values. This prediction, will eventually be able to be tested, possibly by 2030 as the mass ratios are known more accurately and the Sommerfeld Fine-Structure constant is known more accurately.

2.0 Prediction for the Mass Ratio of the Proton to the Neutron

In the paper, "An Electro Magnetic Resonance in 9 Dimensions that gives Mass Ratio of Proton to Neutron", (1) the following equations were developed for the mass ratio of the proton to the neutron

$$\frac{(-\beta^2(1-\beta^2)-(\vec{\beta}\times\dot{\vec{\beta}})^2)}{\sqrt{3}}=\int_0^{pi/2}(\frac{Cos\theta}{2})^9 d\theta \qquad [10]$$

$$\alpha=\frac{1}{\sqrt{1-(\frac{3^{0.5}\pi Me}{16Mn})^2}}=1.000000017097 \qquad [11]$$

Where the mass ratio of the proton to the neutron is equal to $\alpha*\beta^2$ and

$$(\vec{\beta}\times\dot{\vec{\beta}})=0 \qquad [9.3]$$

This yields a predicted mass ratio of the proton to the neutron of the following

$$\alpha * \beta^2 = \alpha * \frac{M_p}{M_n} = 0.99862347872\,(1) \qquad [1.0]$$

3.0 Prediction of the Mass Ratio of the Electron to the Neutron

In Serendipitous Hints at Shape of Electron and Electron/Neutron Mass Ratio(2) the mass ratio of the electron to the neutron is predicted to be as follows.

$$\frac{Me}{Mn} = 5.4386734442 * 10^{-4} \qquad [4.0]$$

4.0 Prediction for the fine structure constant

In Evidence for Granulated, Granular Topological Spacetime the following equation is developed for the fine structure constant (3)

$$\sigma = T\pi^3 \frac{Me}{4Mn} \qquad [4.1]$$

Where

$$T^2 = \frac{1}{\sqrt{1-(2^{0.5}\frac{\pi Me}{3*3Mn})^2}}[(\frac{Mp-Me}{Mn})^2 + (\frac{Mn}{Mn})^2 + (\frac{Mn}{Mn})^2] \qquad [2.1]$$

$$T^2 = 1.000000036041 * 2.99616291064 = 2.996163018629$$

$$T = 1.730942812062$$

$$\sigma = T\pi^3 \frac{Me}{4Mn} \qquad [4.1]$$

$$\sigma^{-1} = 1/(1.730942812062 * pi^3 * 0.00054386734442/4)$$

$$\sigma^{-1} = 137.035999098$$

=

If we use the values for the mass ratio of the proton to the neutron in equation 1.0 above, 0.99862347872 and the mass ratio of the electron to the neutron in equation 4.0 above, of 0.00054386734442 and plug it into equations 2.1 and 4.1 above, we obtain the following value for the Sommerfeld Fine-Structure constant

$$\alpha^{-1} = 137.035999098$$

5.0 Discussion

This paper therefore shows, if the Granulated Space-Time papers and the mass ratio papers, by Michael John Sarnowski are accurate, as is, then the following values will be approached as the values are refined by Codata at some point in the future.

$$\beta^2 = \frac{M_p}{M_n} = 0.99862347872$$

$$\frac{Me}{Mn} = 5.4386734442 * 10^{-4}$$

$$\alpha^{-1} = 137.035999098$$

6.0 References

1) http://vixra.org/pdf/1612.0302v1.pdf
2) http://vixra.org/pdf/1508.0027v4.pdf
3) http://vixra.org/pdf/1601.0234v2.pdf