Prediction for the Quantum Hall effect for the von Klitzing Constant

1.0 Abstract:

The following paper is a prediction for a more precise value for the Quantum Hall effect for the von Klitzing constant. The von Klitzing constant is simply the Planck constant divided by the elementary charge squared. This value, according to CODATA to a very high accuracy. This value in CODATA is 25812.8074555(59) Ω . This paper uses the equations developed in "Evidence for Granulated, Granular Topological Spacetime"(1), "Prediction for the Sommerfeld Fine-Structure"(2), "Prediction for the Mass Ratio of the Proton to the Electron"(3), and " An Electro Magnetic Resonance in 9 Dimensions that gives Mass Ratio of Electron to Neutron"(4) to predict a value for the von Klitzing constant. The value predicted in this paper is 25812.80744812 ohms, which is within 1.3 sigma of the CODATA value listed above. It is predicted, that as these measurements become more precise that the CODATA value will converge around 25812.80744812 ohms.
It should be noted that the value calculated herein uses the mass ratios calculated using the empirical theory of Bremsstrahlung Cherenkov Radiation Resonance developed by Michael John Sarnowski. Therefore it is expected that if the CODATA values converge upon the numbers presented here that it is a validation of the Bremsstrahlung Cherenkov Radiation Resonance Theory.

2.0 Equations and Discussion

The following equation was developed in "Evidence for Granulated, Granular Topological Spacetime"(1),

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

Where

$$T^2 = (\frac{Mp - Me}{Mn})^2 + (\frac{Mn}{Mn})^2 + (\frac{Mn}{Mn})^2 \qquad [2.1]$$

and

$$\beta = \frac{1}{\sqrt{1 - (\frac{\pi Me}{3*3Mn})^2}} = 1.00000001802066067 \qquad [2.2]$$

If we rearrange this equation for $\frac{h}{q^2}$ the von Klitzing constant we obtain the following.

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$$\frac{h}{q^2} = \frac{2Mn}{\beta Me * T\pi^3 c\grave{o}} \qquad [3]$$

If we use the values for "T" and "$\frac{Me}{Mn}$ determined in "Prediction for the Sommerfeld Fine-Structure"(2) and the CODATA values for c, the speed of light, and $\grave{o}$, the vacuum dielectric permittivity.

These values are shown below.

$$T^2 = (\frac{Mp - Me}{Mn})^2 + (\frac{Mn}{Mn})^2 + (\frac{Mn}{Mn})^2 \qquad [2.1]$$

$$T = 1.7309427808440$$

$$\frac{M_p}{M_n} = 0.9986234786761$$

$$\frac{Me}{Mn} = 5.438673444242 * 10^{-4}$$

$$c = 299792458 \frac{m}{s}$$

$$\grave{o} = 8.85418781762 * 10^{-12} \frac{F}{m}$$

Which yields a value for equation 3, for the Quantum Hall effect for the von Klitzing constant of

$$\frac{h}{q^2} = 25812.80744812 ohms$$

Compared to the CODATA value of

von Klitzing constant R_K
Value 25 812.807 4555 Ω

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Standard uncertainty	0.000 0059 Ω
Relative standard uncertainty	2.3 x 10^{-10}
Concise form	25 812.807 4555(59) Ω

The values for the von Klitzing constant is empirical and derived. It will be seen in the future if these derived and empirical portions of equation 3 are correct. It is clear that the value for the von Klitzing constant of 25812.80744812 is within the 1.3 sigma of the CODATA value. This value for the von Klitzing constant is a check for the values determined in This paper uses the equations developed in “Evidence for Granulated, Granular Topological Spacetime”(1), “Prediction for the Sommerfeld Fine-Structure”(2), “Prediction for the Mass Ratio of the Proton to the Electron”(3), and ” An Electro Magnetic Resonance in 9 Dimensions that gives Mass Ratio of Electron to Neutron”(4) as these values were determined without the von Klitzing constant in mind, and yet the value for the von Klitzing constant was within normal expectations of 1.3 sigma from the CODATA value of 25812.807455(59) ohms. The value obtained is amazing since the CODATA mass ratios relative standard uncertainties exceed the CODATA relative standard uncertainties for the Quantum Hall effect for the von Klitzing constant. It is evidence for the Sphere Theory of Michael John Sarnowski

3.0 References

1) http://vixra.org/pdf/1601.0234v2.pdf
2) http://vixra.org/pdf/1611.0364v2.pdf
3) http://vixra.org/pdf/1612.0326v1.pdf
4) http://vixra.org/pdf/1612.0068v2.pdf