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The Quantum Bang Equation

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It is hypothesised that the fundamental dimensions of Time (T), Length (L), Charge (Q), Temperature (Θ) and Mass (M) are linked as follows

$$T = \frac{LQ\theta}{M}$$

To support this hypothesis, the following equation is proposed

$$\frac{\pi \times \mu^2 \times \lambda_e^2 \times k^2}{G \times h \times e^2 \times \alpha^3 \times c^3} = 1 \qquad Dimensions \ \frac{T^2M^2}{L^2Q^2\theta^2}$$

Equivalent to

$$\frac{t_P \times m_P \times 2\pi \times \mu}{l_P \times q_P \times T_P \times \alpha^2 \times \sqrt{2\alpha_G}} = 1 \qquad Dimensions \ \frac{TM}{LQ\theta}$$

Where

$\mu =$ Proton to electron mass ratio
$\lambda_e =$ Electron Compton wavelength
$k =$ Boltzmann constant
$G =$ Gravitational constant
$h =$ Planck constant
$e =$ Elementary charge
$\alpha =$ Fine structure constant
$c =$ Speed of light
$t_P =$ Planck time
$m_P =$ Planck mass
$l_P =$ Planck length
$q_P =$ Planck charge
$T_P =$ Planck temperature
$\alpha_G =$ Gravitational coupling constant (electron)

Using the 2014 CODATA recommended values, the above equation gives the following result: **1.00000015**

Assuming the above equation is equal to 1 exactly, a more precise value of the gravitational constant G can be derived:

$G = \frac{\pi \times \mu^2 \times \lambda_e^2 \times k^2}{h \times e^2 \times \alpha^3 \times c^3} =$ 6.6740810(77) x 10^{-11} $m^3.Kg^{-1}.s^{-2}$ (CODATA value = 6.67408(31) x 10^{-11} $m^3.Kg^{-1}.s^{-2}$)

NB: The "1" in the equation is effectively dimensionless (because all 5 dimensions are linked and they cancel out). Therefore, whatever system of units of measurement we use, that ratio, will always be 1.