THE LAWS OF QUANTUM GRAVITY

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Abstract

In this paper I lay down the Theory of Quantum Gravity and give out applications to Quantum Cosmology, Quantum High Energy Physics, Quantum Chromodynamics, Quantum Electrodynamics, Quantum Nucleodynamics, Quantum Nuclear Chemistry and Quantum Gravitodynamics

1 The Theory of Quantum Gravity

1st Law of Quantum Gravity. In an isolated Quantum Gravity system the variations of energy goes out as time elapses.

$$dmc^2 \to 0 \text{ as } t \to \infty$$

where mc^2 is the energy of the Quantum Gravity system and t, the time.

2nd Law of Quantum Gravity. In a Quantum Gravity system the variations of energy are the sum of the variations of radiation energy, photonic energy and mechanical energy.

$$\frac{dmc^2}{mc^2} = \frac{dW+dR+dF}{W+R+F}$$

where mc^2 is the energy, R, the radiation energy, F, the photonic energy and W, the mechanical energy of the Quantum Gravity system.

3rd Law of Quantum Gravity. In a Quantum Gravity system the sum of the variations of radiation energy and photonic energy is the sum of the gluonic energy and thermomechanical energy.

$$\frac{dR+dF}{R+F} = \frac{dG+dPV}{G+PV}$$

where R is the radiation energy, F, the photonic energy, G, the gluonic energy and PV, the thermomechanical energy of the Quantum Gravity system.

4th Law of Quantum Gravity. in a Quantum Gravity system the variations of gluonic energy goes out as the variations of radiation energy goes off.

$$dG \to 0 \text{ as } dR \to 0$$

where G is the gluonic energy and R, the radiation energy of the Quantum Gravity system.

5th Law of Quantum Gravity. In a Quantum Gravity system the variations of entropy are the variations of radiation energy minus the variations of energy.

$$\frac{dS}{S} = \frac{dR - dmc^2}{R - mc^2}$$

where S is the entropy, R, the radiation energy and mc^2, the energy of the Quantum Gravity system.

6th Law of Quantum Gravity. In a Quantum Gravity system the variations of entropy goes out as the variations of radiation energy goes off.

$$dS \to 0 \text{ as } dR \to 0$$

where S is the entropy and R, the radiation energy of the Quantum Gravity system.

7th Law of Quantum Gravity. In a Quantum Gravity the variations of entropy due to the variations of radiation energy sre positive.

$$dS > 0$$

where S is the entropy due to the radiation energy of the Quantum Gravity system.

1.1 Applications to Quantum Cosmology

As in a Quantum Gravitational Wave the mass is expelled in small bulges on large radiation, lumps of photons and slow dispelling the Quantum Gravitational Wave Equation follows

$$e^{\frac{mc^2 - m_0c^2}{m_0c^2}} = \frac{R}{R_0 + F_0 + W_0} e^{\frac{F - F_0 + W - W_0}{R + F_0 + W_0}}$$

where mc^2 is the energy, R, the radiation energy, F, the photonic energy and W, the mechanical energy of the Quantum Gravitational Wave.

1.2 Applications to Quantum High Energy Physics

in a Quantum Supermassive Black Hole unstable radiation, broad shifts of photonic energy and low fluctuations of mechanical energy come about on its variations of energy thus the Quantum Supermassive Black Hole Equation following

$$\frac{mc^2}{m_0c^2} = \frac{R}{R_0 + F + W_0} \frac{F}{R + F_0 + W_0} e^{\frac{W - W_0}{R + F + W_0}}$$

where mc^2 is the energy, R, the radiation energy, F, the photonic energy and W, the mechanical energy of the Quantum Supermassive Black Hole.

1.3 Applications to Quantum Chromodynamics

As in a Quantum Quark the mass fluctuates small on low radiation and large photonic activity the Quantum Quark following

$$e^{\frac{mc^2-m_0c^2}{mc^2}} = \frac{F}{R_0+F_0+W_0} e^{\frac{R-R_0+W-W_0}{R_0+F+W_0}}$$

where mc^2 is the energy, R, the radiation energy, F, the photonic energy and W, the mechanical energy of the Quantum Quark.

1.4 Applications to Quantum Electrodynamics

As in a Quantum Lepton the mass fluctuates slightly on large radiation and low photonic activity the Quantum Lepton Equation follows as

$$\frac{mc^2}{m_0c^2} = \frac{R}{R_0+F_0+W_0} e^{\frac{F-F_0+W-W_0}{R+F_0+W_0}}$$

where mc^2 is the energy, R, the radiation energy, F, the photonic energy, W, the mechanical energy of the Quantum Lepton.

1.5 Applications to Quantum Nucleodynamics

As in a Quantum Hadron the mass fluctuates low on small radiation and photonic activity the Quantum Hadron Equation following

$$e^{\frac{mc^2-m_0c^2}{mc^2}} = \frac{W}{W_0} e^{\frac{R-R_0+F-F_0}{R_0+F_0+W}}$$

where mc^2 is the energy, R, the radiation energy, F, the photonic energy and W, the mechanical energy of the Quantum Hadron.

1.6 Applications to Quantum Nuclear Chemistry

As the Quantum Nucleus collapses as the energy goes off the Law of Critical Mass follows as

$$\frac{dmc^2}{dR+dF+dW} < 1$$

where mc^2 is the energy, R, the radiation energy, F, the photonic energy and W, the mechanical energy of the Quantum Nucleus.

1.7 Applications to Quantum Gravitodynamics

As in a Quantum Gravity system large quantum fluctuations of the Quantum Gravity Operators come about on small quantum fluctuations of the Quantum Spacetime Energy the Cordero-Grau-Heisenberg Uncertainty Principle follows as

$$\|E(\Psi_1)\| \, \|E(\Psi_2)\| \cdots \|E(\Psi_n)\| = \frac{\hbar^n}{n!}$$

where Ψ_1, Ψ_2,. . .,Ψ_n are the Quantum Gravity Operators of the Quantum Gravity system and $\hbar$, the Planck Quantum Spacetime Energy Constant.