Equilibrium Theory of Everything :Energy Mass Relation

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2012 September 27

<u>About The Author:</u>

Author hails from interdisciplinary academic background & Work Experience in following fields

- Computers and Communications
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In Author's perspective view every object has its own view point for the same reality. Author's description of the theories are from Authors view point about reality. All feedback on this citation are truly appreciated as It would be helpful to build a generalized theory.

Equilibrium Theory of Everything :Energy Mass Relation

The paper "Theory of Everything:Systems Tends To Gain Equilibrium" describes that Absorption of E.M.Energy results in four cases as stated below.

1. Creation of Mass due to energy absorption.
2. Energy dissipation due to Work / displacement.
3. Generation of Heat due to increase of Entropy.
4. A mix of above cases.

Creation of Mass indicates that a Mass formed due to Energy Absorption . This can be thought equivalent to "Capacitance" of E.M.Radiation.

Energy dissipation due to work/displacement can be thought equivalent to "Conductance" of E.M.Radiation.

Generation of Heat due to such absorption can be thought equivalent with the "Resistance" of E.M.Radiation.

In this Paper , formation of mass from EMR is described. The capacitance of EMR is formed due to EMR's Total Internal reflection. At Planck's length the E.M Radiation tends to form a structure Due to *"Total Internal reflection"* of the Wave. Such structure forms a perfect symmetric particle .

Drawing 1: Total Internal Reflection of EMR forming a particle

Particle structure formed due to Total Internal Reflection of EMR can be studied by Quantum Analysts for its dimensions and behavior by using popular methods of of dimensional analysis in four dimensional space .

These particles obey

$$E = MC^2$$

The spiraling direction of Waves determines the spin of the particles. These particles Obey the Equilibrium Principle by sharing Energy . Perfect particle is the One which has perfect Total Internally Reflected structure . These are the a spin-less particle. Such particle has a shape of perfect sphere.

When more Energy interaction takes place with such perfect particle some other short lived particles are formed. These particles have a spin .But such particle are short lived because they do not have any anti particle to satisfy the equilibrium conditions.

Spin-Particle having an antiparticle are able to sustain in such system. Most stable state of such spin-particle is exhibited by electron satisfying Pauli's Principle.

Such Spin-particles spiraling around spin-less Particles to form an equilibrium state leads to the formation of ionic state of an atom .

These tendency of atom to attain equilibrium states is also responsible for the fusion and fission reaction depending upon surrounding condition. Hence it forms Atoms with Higher Mass.

Equilibrium states are also satisfied by the manner in which the spin-particles revolves . Such conditions forms S,P,D,F Orbits around the atom.

Even though these atoms are in able to form somewhat stable structure in equilibrium state , but under the affect of outer EMR's these atoms tends to decay .Under normal circumstance ,The rate decay of atom is equal to rate of formation of atom.

In absence of External EMR these atoms tends to form More stable through inter-atomic bonding.

Considering the Wave Model and considering the case when a particle comprise Total Internal Reflection of only One Wavelength .

$$\text{Velocity } V = \text{frequency } \nu \times \text{ Wavelength } \lambda$$

And

$$E = M \times (\nu \times \lambda)^2$$

and Mass M = Volume of Sphere of radius Wavelength

$$M = 4/3 \, \pi \, (\lambda /2)^3$$

$$M = 4 /24 \, \pi \, \lambda^3$$

$$M = 1/6 \, \pi \, \lambda^3$$

∴ $$E = 1/6 \, \pi \, \lambda^3 \times (\nu \times \lambda)^2$$

$$E = 1/6 \, \pi \, \lambda^5 \times \nu^2$$

$$E = 0.523333 \times \pi \times \lambda^5 \times \nu^2$$

For such hypothetical particle we can calculate the wavelength and frequency of at which the EMR starts forming a particle.

These are the calculations under the ideal conditions when only one wavelength is considered . There can be some experimental variables that can be adjusted in the above equation to achieve the reality.

The results are required to be cross checked with experiments to reach to a conclusion .

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