

**REINTERPRETATION OF GENERAL RELATIVITY
WITH THE POSSIBILITY OF THE FIRST 'TOE'**

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The physical concepts contained in Newtonian gravity and those of General Relativity (GR) are not the same. The Principle of Equivalence without Newton's laws of motion leads to a new theory and greatly simplifies GR. Symmetrical Energy Structures (SES) theory has found equivalency between spacetime, forces, particles and gravity. [1] SES equates these fundamental concepts together and derives the constants of nature to millions of decimal places. [2] The new theory unifies the micro and macro world, defines space and time, and conceivably, is the first TOE (Theory of Everything).

SES theory is based solely on a four-dimensional Big-Bang (BB) light, the **ulton** boson, as the ultimate constituent particle of everything. Universes are spherical electromagnetic waves, ours being one among \rightarrow infinite number of 'Lorentz contracted' three-dimensional universes. The BB gives rise to wave-trains of concentric parallel universes with wavelength, $4L\sqrt{2} \sim 9.1 \times 10^{-33}$ cm, and frequency 3.2×10^{42} /s, which is \sim an energy of 1.3×10^{19} GeV/ulton. The ulton's lightspeed BB explosion away from it's beginning, is measured as time. The ulton transforms exactly into a 'Planck mass potential' when an Energy Sink Hole (ESH) forces it to gravitate implisively until the speed of light is reached in the space direction. This $c(\text{time}) \times c(\text{space})$ or c^2 event phenomena generates Mass.

Most ESHs arise naturally from random rips in the ulton's primeval wave-surface. They are singularities of displaced spacetime with zero volume (V_0) $\sim 1.7 \times 10^{-39}$ (pure), implied radius (r_i) $\sim 7.4 \times 10^{-14}$ cm, and are magnitudes of nonexistence. The by-product is the wave-particle event-horizon nature of matter, formed by super-rapid c^2 implosions.[3]

Transition from the classical world of inertial mass to the quantum, is by gravity's last implosion - represented by the relativistic collapse of the vacuum's de Broglie matter waves, $\lambda = h/mc$, every $\sim 2.4 \times 10^{-24}$ sec.

Matter has energy because of its constant regeneration. The ESH is the catalyst that forces the vacuum to replicate fermionic particles and creates all forces and fields by the ulton's (vacuum) accelerated motion.

REFERENCES

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- [3] E. J. Bacinich, "Reinterpretation of GR...", submitted to GR12 Conf., Boulder CO. July 1989.