

# 8T – The Coupling Constants Series Gravitational Collapse

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## Abstract:

By analyzing the primordial coupling constants series term of gravity as a short ranged force, which we regard a noticeable effect at large scales fermions clusters, it is possible to present a new angle of analysis regarding the gravitational collapse.

## Introduction

The 8T setting is a Lorentz manifold,  $s = (M, g)$ , with (3,1) signature. The manifold is the connected manifold, invoked stationary,  $s = s_0 \times \mathbb{R}$ . The manifold has areas of extremum curvatures that remain as they are overtime, this are yielding time invariant acceleration from them on the metric tensor  $M$ , given by two conditions below (1). The reason for the acceleration in the 8T is that the manifold is a part of an infinite packet of universes, which interact at areas of extremum curvatures, as  $g$  is the Ricci flow, and as a result flatten each other metric tensor causing it to accelerate in a time invariant rate, given by equations (1.2) and (1.21). By (1.2) those manifolds are topologically invariant.

$$\frac{\partial \mathcal{L}}{\partial s} \frac{\partial s}{\partial M} \frac{\partial M}{\partial g} \frac{\partial g}{\partial t} - \frac{\partial \mathcal{L}}{\partial s'} \frac{\partial s'}{\partial M} \frac{\partial M}{\partial g'} \frac{\partial^2 g'}{\partial t^2} = 0 \quad (1)$$

$$\frac{\partial g}{\partial t} = 0 \cap \frac{\partial^2 g'}{\partial t^2} = 0$$

$$\frac{\partial \mathcal{L}}{\partial s_1} - \sum_{n=2}^{\infty} \frac{\partial \mathcal{L}}{\partial s_n} = 0 \quad (1.1)$$

$$\frac{\partial \mathcal{L}}{\partial s_1} \frac{\partial s_1}{\partial M} \frac{\partial M}{\partial g} \frac{\partial g}{\partial t} - \sum_{n=2}^{\infty} \frac{\partial \mathcal{L}}{\partial s_n} \frac{\partial s_n}{\partial M} \frac{\partial M}{\partial g} \frac{\partial g}{\partial t} = 0 \quad (1.2)$$

The manifold experience arbitrary amount of net curvature isomorphic to prime numbers or the number one. That construction yielded the primordial coupling constants series presented in equations (1.4) to (1.43) present the first and second representation. I.e. net curvature on the matric tensor and the prime critical line.

$$F_{V=0} = 8 + (1) \quad (1.4)$$

$$F_R \# = \left( 8 * \prod_{V=1}^{V=R} N_V + (3) \right) + N_V = 30:128:850:9254.. \quad (1.41)$$

$$N_V = 2 \left( V + \frac{1}{2} \right); \quad V \geq 0 \quad (1.42)$$

$$N_V \in \mathbb{P} \cup (+1); \quad \mathbb{P} \rightarrow \text{Set of Primes}$$

$$N_V = P_{max} \in [0, \mathbb{R}] \cup (+1); \quad P_{max} \in \mathbb{P}$$

$$8 + (1): (24 + (3)) + 3: (120 + (3)) + 5: (840 + (3)) + 7 ... \quad (1.43)$$

$$8 + (1)$$

$$[(8 * 3) + (3)] + 3 \rightarrow \left[ 2N_1 + \frac{1}{2} \right] + \frac{1}{2}$$

$$[(24 * 5) + (3)] + 5 \rightarrow \left[ 2N_2 + \frac{1}{2} \right] + \frac{1}{2}$$

$$[(120 * 7) + (3)] + 7 \rightarrow \left[ 2N_3 + \frac{1}{2} \right] + \frac{1}{2}$$

For example, the Electromagnetic coupling term, we have proven the invariant three to be an electron:

$$[(24 * 5) + (3)] + 5 \rightarrow [(24 * 5) + (e)] + \gamma \quad (1.44)$$

We presented recently the EMT symmetry by the terms (1.45) and (1.46):

$$[(24 * 5) + (3)] + 5 \rightarrow [(24 * 5) + (\mu^-)] + \gamma \quad (1.45)$$

In addition, the Tau:

$$[(24 * 5) + (3)] + 5 \rightarrow [(24 * 5) + (\tau^-)] + \gamma \quad (1.46)$$

Up until now, reader is probability familiar with every equation presented, as those are 8T fundamentals. From here on out, we have a completely new paper. To the subject of gravitational collapse. The star is a fermionic cluster that associated with the fermion term:

$$\sum_{i=1}^N \delta g_i = 0$$

Since the fermion cluster has mass, which is curvature converging to a point; it is associated with the inverse series of the primordial, proven by the 8T, the SSB in the direction:

$$8 - (1)$$

Moreover, the star generate gravitational ripple on the matric tensor given by the term:

$$8 + (1)$$

Suppose the ripple on the matric tensor is gravitational, that is of spin two, short ranged.

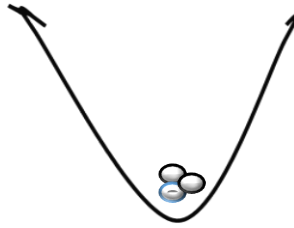
$$[(2N_{gravity}) + (3)] + N_{V1} + N_{V2} + N_{V3} = \left[2N_{gravity} + \frac{1}{2}\right] + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} \quad (2.2)$$

$$[2N_{gravity} + 2] \rightarrow [2N_{gravity}] \quad (2.3)$$

In addition, suppose the star also generating additional Bosons, isomorphic to coupling terms that are long ranged, that is spin one. The coupling terms are balanced out by the curvature converging inward, in the 8T arbitrary variations vanish in even numbers.

$$8 + (1) + 8 - (1) = 0$$

At a certain development of the star, the curvature diverging outward terms may get weaken as the star utilizes the helium and hydrogen supplies within its core, now the curvature converging inward becomes more dominant and so does gravity (The implicit assumption is that it takes energy to generate the arbitrary prime curvatures diverging). Since gravity has spin two it is short ranged and can be regarded to be a parabola in the core of the star. The fermionic elements begin to cluster toward that parabola in core of the star. The parabola becomes denser and denser. The matter distribution forming the star shrinks to the parabola and so becomes highly dense, as it was converging toward the core of the star, a singular point described by spin two. The process is one sided and can not be reversed as the reversed would require to get an higher amount of energy to unpack the dense configuration. The process is similar to Quark confinement and the sea of gluons, presented in the illustration below.



Instead of having just three triplet we have in accordance to the coupling constants rapid growth of total variations element an infinite amount of varying elements, the net curvature magnitude is immense as well, but due to the principle to least variations it is neglected comparing to the magnitude of the total variations – which comes to an agreement with the weakness of gravity.

## References

- [1] O. Manor. "8 Theory – The Theory of Everything" In: (2021)