

The Planck Particle is the First Measurable Form of Matter and/or Energy in the Cosmos

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Abstract—This paper argues that the Planck particle (PP) and the Planck vacuum (PV) represent the first measurable form of matter and/or energy. The transcendental name of that particle is the *eltimaton*. Furthermore, we are informed that all physical-energy and cosmic-force circuits have their origin in nether Paradise.

Index Terms—Planck Particle, Ultimaton, nether Paradise, Planck Vacuum Theory.

I. INTRODUCTION

THE spacetime of the PV theory consists of a continuum pervaded by a degenerate collection of PP cores ($\pm e_*, m_*$) whose vacuum energy is many orders-of-magnitude greater than ordinary free-space particle energies. The PV theory shows that these low energy particles are coupled to this high-energy quasi-continuum via the spin angular momentum common to both kinds of particles [1]. The problem that this paper addresses is finding the origin of the PP and PV energies.

The theoretical foundation [1]—[5] of the PV rests upon the unification of the Einstein, Newton, and Coulomb superforces:

$$\frac{c^4}{G_d} \left(= \frac{m_* c^2}{r_*} \right) = \frac{m_*^2 G}{r_*^2} = \frac{e_*^2}{r_*^2} \rightarrow r_* m_* c = \frac{e_*^2}{c} (= \hbar) \quad (1)$$

where the ratio c^4/G_d is the curvature superforce that appears in the Einstein field equations. G is Newton's gravitational constant, c is the speed of light, m_* and r_* are the Planck mass and length respectively [6, p.1234], and e_* is the massless bare (or coupling) charge. The Planck time is $t_* = r_*/c$ [6, p.1233]. The fine structure constant is given by the ratio $\alpha \equiv e^2/e_*^2$, where e is the observed electronic charge magnitude. The ratio e_*^2/c to the right of the arrow is the spin coefficient for the PP, the proton, and the electron cores, where \hbar is the reduced Planck constant. One of the e_* s in e_*^2 belongs to the PP under consideration and the other to any one of the remaining PPs making up the PV state.

The two gravity constants can be obtained from the three superforces in (1) and are [7]

$$G_d = \frac{r_* c^2}{m_*} = \frac{e_*^2}{m_*^2} = G \rightarrow \frac{e_*^2}{c} (= \hbar). \quad (2)$$

The proton and electron cores and their antiparticles are ($\pm e_*, m_p$) and ($\pm e_*, m_e$) respectively. It is noted that the Newton constant G contains charge e_* , while the Einstein G_d does not. Thus the charged G responds to photons, while the uncharged G_d does not. The gravitational superforce equation for G is found in (1). The corresponding equation for G_d ($m_* c^2/r_*$) provides the Einstein curvature force operating on the PV state.

The spin angular momentum (e_*^2/c) from (1) is assumed to be transferred to the electron and proton cores via the spin equations

$$r_* m_* c = \frac{e_*^2}{c} = r_e m_e c = r_p m_p c. \quad (3)$$

Since the mass m_* of the Planck particle is nineteen to twenty-two orders of magnitude heavier than the electron (m_e) and proton (m_p) masses, *there must be something special about the Planck particle*. That something special is a transcendental state described within the Urantia Book [8, p.467],[42:1.1] (Appendix A), and in the following text.

II. CONCLUSIONS AND COMMENTS

The PV theory up to this point in time has derived the superforces in equation (1) without specifying their origin. That discrepancy is overcome in Appendix A, Appendix B, and in the flowing text. The transcendental state mentioned at the conclusion of Section I consists of the four paragraphs [42:1.1], [42:1.2], [42:1.3], and [11:5.1] found in Appendix A.

The first sentence in paragraph [42:1.3] claims that there is innate in matter and present in universal space a form of energy not known on Urantia (planet earth). However, the physics in that claim provides a perfect description of the PV state in equation (1). Therefore that UB description is clearly true for the PV theory also. However, the derivation of the PV theory in (1) was accomplished considerably before its connection to the UB was recognized.

The last phrase in paragraph [42:1.2] describing the *eltimaton* as the first measurable particle of energy contains two interesting parameters, *eltimaton* and *measurable*. The ultimaton is just another name for the Planck particle; and the parameter measurable means "the ability to express physics in mathematical form."

Finally, it is revealed [11:5.1] that all the physical-energy and cosmic-force circuits have their origin in the nether Paradise. Thus all of the equations (1)–(3) have their origin in the nether Paradise also.

APPENDIX A PARADISE FORCES AND ENERGIES

The URANTIA BOOK (UB) is an epochal revelation that was first published (in English) in circa 1955 [8]. It is now published in twenty-nine languages. The previous four paragraphs come directly from the UB source [8, p.467,122]. The notation 42:1.1, for example, reads Paper 42, Section 1, Paragraph 1. The boldfacing below is by the present author.

[42:1.1] **The foundation of the universe is material, but the essence of life is spirit.** The father of spirits is also the ancestor of universes; the eternal Father of the Original Son is also the eternity-source of the original pattern, the Isle of Paradise.

[42:1.2] Matter–energy—for they are but diverse manifestations of the same cosmic reality, as a universe phenomenon is inherent in the Universal Father. . . . Matter may appear to manifest inherent energy and to exhibit self-contained powers, but **the lines of gravity** [equation (2) in the text] involved in the energies concerned in all these physical phenomena are derived from, and are dependent on, Paradise. **The eltimaton, the first measurable form of energy, has Paradise as its nucleus.**

[42:1.3] **There is innate in matter and present in universal space a form of energy not known on Urantia. . . .**

[11:5.1] Concerning nether Paradise we know only that which is revealed; personalities do not sojourn there. It has nothing whatever to do with the affairs of spirit intelligences, . . . **We are informed that all physical-energy and cosmic-force circuits have their origin in nether Paradise . . .**

APPENDIX B THE UB AND WCD

The present author (WCD) has been a student of the UB since circa 1972 and **has always found comparisons between the UB and the PV theory, where applicable, to be in agreement.** However, since the UB does not deal in equations, none of the equations in the PV theory come from the UB.

Furthermore, the birth of the PV theory is solely due to the present author (see www.planckvacuumDOTcom); consequently any errors or imperfections in the PV theory are due to WCD alone.

It can be noted that the radiation we measure in the night-sky is related to equation (3).

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