

Comments on Bert Shreiber's 'Falsities IN Current Theories'

The following comments are based on the findings of a new theory of electron structure (Space Vortex Theory, SVT) that postulates mass less, continuous, fluid-space with a limiting angular rotation when in vortex formation as the primordial substratum of the universe (very briefly stated). Limiting angular rotation (which is also maximum velocity gradient) is c/r_e , where c is the limiting speed of space and r_e is the radius of the spherical void (dynamically stable, field less, energy less) created at electron's vortex center. Mass and charge of electron are derived from its structural fields (electrostatic, gravitational), thus discovering two most fundamental relations on mass and charge applicable to all particles and cosmic bodies.

1B: **Right** as per the current theories, but as per SVT, Planck's Constant is the angular momentum of a static electron: $(4/5) m_e c r_e$, derived from space-vortex structure of electron. Here, c is the constant speed of light transmission in and relative to fluid-space (hereafter termed as 'space'), r_e is the radius of the field-less void at electron center within the space-vortex, $m_e = \text{volume of the electron's central void} \times c$. Charge of electron, $q_e : (\pi/4) 4\pi r_e^2 \times c$.

1D: **Right**, there can be no quantum jump(s)etc...but quantum of length (in matter) as per SVT is r_e , mass-quantum is m_e , minimum time (travel across matter) can be taken as r_e / c ; but no quantum of length and time in continuous space.

1E: **Right**, there is no graviton (particle-like) but, the structural gravitational field of electron is: $(k/4\pi c) m_e / (r)^2$, where $k = 1/s^2$.

2: **Right**, speed of light has a maximum scalar value in fluid-space (absolute vacuum free of matter with mass, though may contain fields).

2A: Bert's suggestion to use 'speed' rather than 'velocity' in my work of SVT is accepted.

3: **Right**, space is mass less and there is no question of its temperature.

4: **As per SVT**, light as well as all fields like electrostatic, magnetic, electromagnetic, gravitational are mass-less effects. Fundamentally, all these are derived in SVT from velocity, acceleration, potentials and their gradients (in fluid-space) from electron's vortex structure. Photon (particle-like) is an erroneous concept. Photo electric effect is explained in SVT with energy-shell nature of light (analyzed elsewhere).

6: **Wrong as per SVT.** Centrifugal force (outward radial force on bodies describing curvilinear motion) is created due to atomic structural interaction between the body in motion and the surrounding as well as interpenetrating fluid-space.

8, 9: All field-effects are transmitted in fluid-space (absolute vacuum) at constant speed c as its very property, is the basic postulate of SVT.

10: **True,** Planck's-Constant is the angular momentum of electron and can be calculated from electron's parameters right from its vortex structure.

11: **True,** zero-point energy that can be tapped does not exist. Fundamental cosmic energy is defined in SVT : "A three dimensional volume of mass- less, fluid-space in acceleration".

12: **Very true,** virtual is not real.

13: **True,** structural mass of electron or bodies in general does not increase with speed.

15: Light will be produced by an accelerating mass in the region trailing behind the moving mass but may not be ahead of it. While decelerating, light effect may be ahead of it.

[As per SVT, in an atom, all fields of nucleus and orbital electrons can be supposed to be neutralized (not killed). Such an atom will have only gravitational structural field (arising out of each electron composing it) external to it. A stationary body composed of neutral atoms has a specific configuration of its gravity field structure around it and in space. When in motion relative to space, the field structure shifts at speed c so as to readjust and regain its gravitational potential at each point in space. This process is seen as light-effect. **Time varying gravitational potential at a point in space is seen as light effect.** There is no loss of structural energy or kinetic energy of atoms (vibrating or in acceleration) due to production of light effect. There is no photon like energy-entity leaving the structure of a body in uniform motion or in acceleration. Since the process of adjustments of magnitudes of gravitational potentials starts from the nuclei and atomic boundary of orbital electrons, light-effect spreads starting from its source of accelerating/vibrating atoms.]

17: In SVT, Coulomb equation is derived from the charge-equation of electron. $E = (c/4\pi) q_e / r^2$. It is shown that : $\mu_0 = 2/ \pi c$. And $\epsilon_0 = \pi / 2c$.

18: Time varying gravitational potential (of the source-atoms) at a point in space produces light effect. During annihilation of electron/ positron, electric and gravitational potentials of the particles die off, thus producing a spherical shell of light of wave length nearly equal to electron radius (4×10^{-11} cm) transmitting out in and relative to space erasing the fields of the particles that got annihilated.

20; **True**, it is the apparent cancellation/ reinforcement.

21: Light is a mass-less entity --- Ideally it is a spherical shell of radial width (its wave length) expanding at c relative to space medium.

22: **True**, orbital electrons can not fall down to another orbit because they are carried by the space vortex enclosing their nuclei.

24: The highest frequency can be: c / r_e , which is $3 \times 10^{10} / 4 \times 10^{-11}$, that is, 0.75×10^{21} . Proton and anti proton collision should produce a shower of electrons and positrons and annihilations in each unit of only one electron and one positron. This is because a proton core has only electrons and positrons assembly enclosed within an overall space –vortex giving it charge –property.

25: **Yes**, gravitational constant G is only a constant of proportionality. It can be derived from the solar space vortex in the planetary plane that carries the planets around.

The velocity field v at a point in solar space vortex around the sun falls inversely as the square root of the distance (radius) from the sun's center (derived elsewhere). This is the same as the variation of the orbital speed of a planet around the sun as per the Kepler's equation. Thus, $v = k / r^{1/2}$, or $v^2 = k^2 / r$, where k is a constant. Multiplying both sides of the above equation by the mass of a planet and dividing by r :

$$m v^2 / r = m k^2 / r^2 .$$

Newton's equation on gravitation for a planet of mass m , and the sun's mass M_s is:

$$m v^2 / r = m (G M_s) / r^2 .$$

From above it is seen that: k^2 derived from Kepler's equation and also from the principles of SVT is the same as " $G M_s$ " in Newton's equation. It is clear that Kepler's equation is the foundation of Newton's gravitational equation. If the orbital speed of planets did not fall with distance as it does, Newton's gravitational equation will be inapplicable. As per SVT, planets throughout the universe and also the stars will have orbital speeds that fall inversely as the square root of their distances from their primary. In SVT, gravitational constant for an atom of average mass has been derived.

27: Electron vortex structure has an inward acceleration field c^2 / r_e acting on the spinning space-interface enclosing a spherical void. This causes the highest pressure (if we can use this word 'pressure' for the 'inward field') from space on electron. All nuclei of matter are composed of electrons and positrons ----- dynamically stable and assembled under their repulsive (electrical) and attractive (magnetic) structural forces. Space vortices enclosing each nucleus produce charge-effect and also inward force on nuclei (against splitting forces of protons in nuclei). All planets with axial rotations are enclosed within their respective space vortices that produce surface gravity and pressure from space. Surface gravity of cosmic bodies (planets, stars, galactic cores) is calculated this way. Space exerts pressure on matter because all matter is composed of hollow (void) electrons.

28: In photoelectric effect, a shell of light with radial and inward acceleration field (c^2 / λ , pointing toward the source of light) along its wavelength interacts with photoelectrons held in atomic vortex under acceleration field pointing toward the nuclei. Accidental alignment of these opposite acceleration fields ejects photoelectrons that carry their own kinetic energy that they had in orbit prior to release. No energy is passed on from the shell of light to the photoelectrons.

29: **True**, less of electrons will produce positive charge effect.

31B: **True**, too large mass can not cause gravitational collapse against charged nuclear forces.

Planets, stars, galactic cores are enclosed within space vortices exerting gravitational pressure from space. Calculations (from SVT) show that at a radius of 1.408×10^{16} cm from the center of our galactic core, space circulation in the vortex of the galaxy reaches c . This will create an inward acceleration field (surface gravity, pressure from space) on the core: $c^2 / 1.408 \times 10^{16}$ cm / s², that is, about 6500 m / s² only, against the sun's surface gravity of 274 m / s². The maximum possible mass-density in the universe can not exceed: 3.42×10^3 g / cm³.

32: As per SVT, there is no stable mass smaller than electron mass.

34: **True**, cold fusion is possible theoretically as per SVT.

37: **True**, electrons are not distributed like clouds. Each electron (un-interacted externally) has a specific orbit in the space vortex enclosing its nucleus.

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PS: Recently, it was predicted that two galaxies can collide only if their spin directions are opposite. This prediction came true. Also two galaxies with similar direction of spins will be electrically repelled.

It is the space vortices around galaxies that hold their core together without explosion by creating inward pressure from space. The very regions of space in between colliding galaxies or around galaxies are dynamic and mass-less and are being mistaken as dark matter.