Time, Mass & Space Quantum

The onduscular equation $\frac{2m}{h^2}(E-U(r))f(r,t)+\frac{R}{r}\frac{\partial^2(f(r,t))}{\partial r^2}=\frac{1}{V^2}\frac{\partial^2 f(r,t)}{\partial t^2}$ (1) is valid in both spherical and cylindrical coordinates it emerges from a combination of Schrodinger which is the first degree and Klein-Gordon temporal equation of the second degree with parameters R chosen, so for a small radius $r_{Bohr,}$ for r of atomic value to coincide with the Schrodinger equation exactly and predict the evolution of wave function to huge values of r on the order of galactic distances. The wave function of the Schrodinger equation has the supposition that is null at infinity, is normed, has the dimension of $[L^{-3/2}]$, and predicts the probability of the existence of the micro particle in volume dV. Schrodinger's equation is (2):
$\frac{2m}{h^2}(E-U(r))f(r,t)+\frac{\partial^2(f(r,t))}{\partial r^2}=ih\frac{\partial f(r,t)}{\partial t}$ & Klein-Gordon is $\frac{2m}{h^2}f(r,t)+\frac{\partial^2(f(r,t))}{\partial r^2}=\frac{1}{c^2}\frac{\partial^2 f(r,t)}{\partial t^2}$ (3)
Thus, eq (1) for m = 0 is a wave equation with variable parameters and seems to be true. $\frac{R}{r}\frac{\partial^2(f(r,t))}{\partial r^2}=\frac{1}{V^2}\frac{\partial^2 f(r,t)}{\partial t^2}$ (4) But all 3 equations are different, and the wave equation is not satisfactory $\frac{\partial^2(f(r,t))}{\partial r^2}=\frac{1}{c^2}\frac{\partial^2 f(r,t)}{\partial t^2}$ (5),
The effective wave function of onduscular equation has the supposition as null at R (or 2R) is normed, has the dimension of $[L^{-3/2}]$, and predicts the probability of the existence of the microparticle in volume dV. Also, a condition of the derivative = R in origin verifies the condition that the speed of interaction has the velocity V, whatever it will be. The value of R = $3.9228\cdot10^{22}$ m is calculated in OndSLP.pdf =>
The change of variable from Schrodinger to QFT Document
The duality wave-particle is generated by the fact that all atoms and particles receive energy from stars and are one-time quanta particles and one-time quanta waves of probability and have the definition $p(x,t)=|\psi(x,t)|^2$ as in Bohm's Quantum Potential $P(r_b,t_0)=|\psi(r,t_0)|^2$, and between states executes an instant quantum jump from the successive position in space due to the granularity of space-time. Also suppose that force-mediating particles of these interactions are electronic neutrinos for gravity which is a Majorana particle with spin quantum number s = 0, photons for light s = 1, magnetrons for magnetic forces, and tau neutrino for time, a Dirac microparticle with spin quantum number s = -½ ... Space has a special treatment but we barely say that muon neutrino is the space-mediating particle, a Dirac particle with spin quantum number s = -½. The other elementary stable particles are the electron, proton, neutron, and phonon, which are treated as an equation in TOnduscular.pdf;
Schrodinger's and onduscular equations inference document
The boundary condition f(R) = 0 or f(2R) = 0, or another initial condition was determined by dowsing (the initial derivative = -/+R).

The Local Universe (LU) is finite and has probably a 16.42 billion light-years radius (without counting the space expansion comoving distance 94 billion light-years, for details see RedShift Document)… equal to $2\cdot Rs = R\cdot$dimension nucleon (proton diameter)/dim quark thus is $3.9228\cdot2\cdot0.8414/0.43\cdot10^{25}$ $m=1.55329\cdot10^{26}$ m = 16.42 billion Light Years. The definition of LU is the spherical region in space beyond which nothing escapes from that sphere, light slows down until it stops (when the direction is normal to the surface), and γ-rays don't travel outside the borders. Thus, the James Webb telescope shouldn't discover signals over that distance even in infrared. The Big Universe refers to a bigger area of space, greater than LU at least 400 times bigger, and for example, in the cold spot in the CMB, we have contact with our neighboring Local Universe. Starting from the onduscular equation particularized for Muon Neutrino, which is a Dirac neutrino with spin quantum number s = -½, thus we have: $\frac{R_S}{r}\Delta f(r,t)=\frac{1}{c^2}\frac{\partial^2 f(r,t)}{\partial t^2}$ (4)
As an initial condition, $f(2R_S)=0$, $f'(0)=R$, and the speed of interaction is the velocity of light c, the same as the electronic neutrino, so gravity and space have a similar curvature… Initial condition $f(2R_s)=0$; $f'(r)/dr(0)=R$ where Rs= is a constant distance. Hence, the value $2\cdot Rs = R\cdot$diameter of proton/dim quark, thus is $2\cdot3.9228\cdot0.841419/0.43\cdot10^{25}$ $m=1.553292368\cdot10^{26}$ m = 16.41866billion light-years. Thus, $2\cdot Rs\sim32.8373$ billion Light-years. The Muon and Tau Neutrino provided the nature of space & time, which is bordered and finite in "big" (Local Universe) and "small" (Space &Time Quanta). The Higgs Boson has a spin quantum number s = 1. The Muon Neutrino is responsible for mass matrix particle reparation. Those 2, the Higgs

Boson &Muon Neutrino, are bonded together in the process of mass and space existence. The particle in the motion is a 1-time quanta microparticle and a 1-time quanta wave of probability, and between them executes an instant quantum jump to the successive position in space. At the transformation of the microparticle into a wave of probability, it emits a muon neutrino, which gives the repartition of the mass in space. **The mass quant is equal to ~0.143377MeV/c^2,** probably the same ratio 6553 with respect to nucleon mass, as the ratio of electron diameter $2.81794\cdot10^{-15}$ m and space quanta (the Quark dimension of $0.43\cdot10^{-18}$ m). Ratio $(2.81794/0.43)\cdot10^3=6553$ Thus mass quant equal to Mass Quant = neutron mass/6553 = $2.55597\cdot10^{-31}$ Kg. The space quanta are the dimension of the Quark $0.43\cdot10^{-18}$ m, see the link below:
https://arxiv.org/abs/1604.01280
The energy of the mass quantum of the electron is 0.51089MeV under mass quant energy. There are 3 informational quarks: mass, magnetic field, and electric charge. There is energy associated with the Einstein equation: $E = m\cdot c^2$ in almost equal amounts. The proton has an energy of 938.256MeV = 1836.5·electron Energy, and the neutron has 939.55MeV = ~6553 mass Quants. Electron classical radius $2.81794\cdot10^{-15}$ m is 6553 of space quanta. Proton radius is $0.8414\cdot10^{-15}$, thus 1979.809412 quanta of space; thus, the curvature of space is 1979.8 times smaller than the gravitational field. Photon has a Time Quanta equal to $\mathbf{T_c\sim 1.765\cdot10^{-19}}$ **s** wave and a time quanta T_c particle with rest mass 0. The moving electron is a Time Quanta T_{ce} wave of probability and a time quanta T_{ce} physical particle with rest mass m_e, where $T_{ce}=1.765\cdot10^{-19}$ s = T_c, which is a quanta of time of the photon. For a moving electron, the Time Quanta is

$$T_{ce}=T_{quanta}=\frac{r_B.h}{E\cdot\lambda}=\frac{8\pi^2\varepsilon\cdot\hbar^3}{E\cdot\lambda\cdot m\cdot e^2}\qquad \alpha=\frac{e^2}{4\pi\varepsilon c\hbar}=\frac{1}{137}\qquad r_B=\frac{4\pi\varepsilon\hbar^2}{me^2}\qquad (5)$$

V=n·ħ/m·r_B for n=1 we have for Bohr radius the electron speed $V=\frac{\hbar}{m\cdot r_B}=\frac{\hbar\cdot m\cdot e^2\cdot c}{4\pi\varepsilon m\cdot\hbar^2}=\frac{e^2\cdot c}{4\pi\varepsilon c\hbar}=\alpha\cdot c$ where h is a constant Planck; V and m_e are the speed and mass of the electron, c is the speed of light, and r_{Bohr} Bohr radius, and "α=1/137" is the fine-structure constant. Thus, at the limit for 1S orbital of Hydrogen atom, V=c/137 and m_e we have $T_{ce}=T_c$. Into a Time Quanta, there is a succession of quantum jumps effectively between successive positions in space. (That is instant!) The probability wave instantly collapsed when interacting by measuring with an instrument, and we observe the position of the momentum or other physical property constraining the microparticle to remain for a few Time Quanta. Material particles with properties such as mass, velocity, and other parameters. After the process of measuring and the constraints of being a particle, the electron, after several Time quanta, the alternate process of the wave of probability-particle is restored.
For the first orbit of the Bohr model, we have T_{ce} = ~$1.765\cdot10^{-19}$ sec equal to the photon Time Quanta. Thus, an electron may travel through 2 close splits at the same time if the distance is less than the attenuation sphere of the probability wave and interfere with itself. The attenuation sphere of the probability is for about a small percentage of the initial intensity value of the pilot wave probability that decreases very rapidly with –R gradient and has the definition $p(x,t)=|\psi(x,t)|^2$ as in Bohm's Quantum Potential. If the speed depends on the x coordinate, V(x), according to the Flux conservation equation of the probability density:

$$\frac{\partial p(x,t)}{\partial t}+\frac{\partial(p(x,t)\cdot V(x))}{\partial x}=0 \qquad (6)$$

Thus, we can solve the equation ψ(r,t) satisfies onduscular relativist equation:

$$\frac{2\cdot m_e}{\hbar^2}\sqrt{1-\frac{V^2}{c^2}}\left(E+\frac{e^2}{r}-\frac{L^2}{2\cdot m_e\cdot r^2}\right)r\psi(r,t)+\frac{R}{r}\frac{\partial^2(r\psi(r,t))}{\partial r^2}=\frac{1}{V^2}\frac{\partial^2 r\psi(r,t)}{\partial t^2} \qquad (7)$$

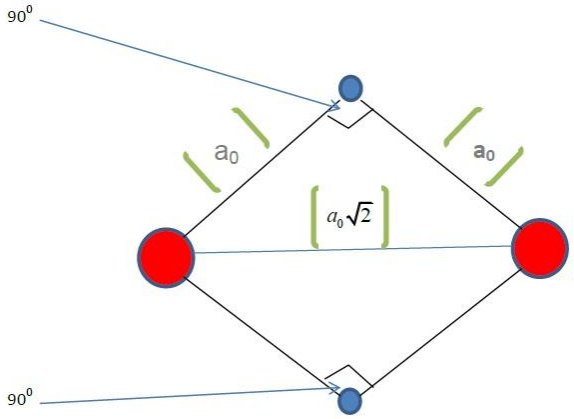
$$\frac{2\cdot m_e}{\hbar^2}\sqrt{1-\alpha^2}\left(E+\frac{e^2}{r}-\frac{L^2}{2\cdot m_e\cdot r^2}\right)r\psi(r,t)+\frac{R}{r}\frac{\partial^2(r\psi(r,t))}{\partial r^2}=\frac{1}{\alpha^2c^2}\frac{\partial^2 r\psi(r,t)}{\partial t^2} \qquad (8)$$

Considering the electron in the potential field $U(r)=-\frac{e^2}{r}$ and E_R energy $E_{Rydberg}$
$E_R=\frac{me^4}{32\pi^2\varepsilon_0^2\hbar^2}$ = 13,6eV or $2.179\cdot10^{-18}$ J and $rb=\frac{4\pi\varepsilon_0\hbar^2}{me^2}$ Radius r_{Bohr} = 0.529 Ångstrom.
http://www.michaelvio.byethost8.com/Electron.pdf
The exact value of the Onduscular Wave Function of the electron is in the file ElecSLVA.mw, where R = $3.9228\cdot10^{22}$ m; V=α·c velocity of microparticle and c speed of light ħ normed Plank.
There is a simplified version link below:
http://www.michaelvio.byethost8.com/ElectEcuat.pdf

The time quanta provided by the τ neutrino is a very short time interval. The time quant for the photon is **Tc~1.765·10^{-19} seconds** = the time that the photon is required to travel the Bohr Radius nucleus of the atom 0.529 Angstrom at 3·10^{8} m/s.

https://science.sciencemag.org/content/370/6514/339 "Experimentally, the least measured time interval until now is 2.47·10^{-19} s, equal to~1.5·10^{16} units of Planck time. Time Quanta for an electron in an H_2 molecule is thus 2.47·10^{-19} sec because the value is uniquely determined by the energy, mass, and velocity of the electron in the molecule of H_2. We may approximate the velocity of the electron moving in the 3rd orbit He^+ with the formula, Vn = (c/137) Z/n, where Z=2, n =3 and velocity V of 1S orbital thus the medium speed V_{He+} = (2/3) ·V thus Tce_{He+} ~ 1.5·Tce approximatively equal to the molecular Hydrogen. The value Tc is uniquely determined by the energy, mass, and velocity of the electron.

Another approach is as in the picture below, where the distance between the H_2 protons is $a_0 \cdot \sqrt{2}$ (with red protons and blue the electron) thus $a_0=r_B$=0.5291772·10^{-11} m thus T_{H2}=Tce·1.4142= 2.47·10^{-19} s:



An electron makes a complete rotation on the nucleus at an S orbital with radius 0.529A into ~1.52·10^{-16} sec, thus 860.8-time electron quanta 1.765·10^{-19} sec. Into a Time Quant, the electron travels an angle of approximately 25 minutes of arc (~half of a degree angle) or in space ~0.02 steradians. Time Quant for an electron for that speed is equal to the photon quanta Tc in which the electron travels 1/860.8 of a rotation, thus one rotation in 860.8 electron Time Quants. Thus at an initial point on the radius Bohr on the 1S orbital of the hydrogen atom, the electron is fiscally in the spherical cords and uniquely determined (r_b,t_0) a period Time Quanta of the electron that is ~1.765·10^{-19} sec and after that time it makes an instant jump somewhere over 25 minutes of arc to its next position with the parameters of equation (4) and travels 1/860.8 of a rotation. Then the electron generates a probability wave at t_0 (Bohm's Quantum Potential $P(r_b,t_0)=|\psi(r,t_0)|^2$) The probability density emitted given from equation (9) (flux conservation equation) and (10) that decreases abruptly from the initial value $P(r,t_0)$ at t_0 to a smaller value continuously, as in the (plot 1) below, is propagated instantly. After the electron is in a position given by the Effective Wave Function $\psi(r,t_0+T_{ce})$ over an instant jump, it emits another wave of probability similar to the initial one, so the process continues indefinitely with the emission of a muon neutrino each Time Quanta. The duality wave-particle is caused by the τ neutrino generated by the Sun, and the Time Quanta is the microparticle that creates time and space, and also strengthens gravity. It's similar to the process that takes place in the nucleus of the atom, as in the transformation below, the reactions are continuous, and the transformations are as follows, where the abbreviations are: the sign. ⌈ Is emission and ⌋ Is absorption posit is positron, and the brackets are for grouping decay:

$$p + \rfloor\nu \xrightarrow{transf} n + posit \xrightarrow{decay} (p + e + \nu\lceil) + \mu\lceil + posit = p + (e + posit) = p$$

And the τ neutrino will collide with a proton, generating the process of continuous migration of pairs of proton-neutron, generating gravity, magnetron, and the μ neutrino that generates the hologram of space. We will analyze the Hydrogen atom.

$$p + \rfloor\tau \xrightarrow{transf} n + \nu\lceil + \pi^+ + \mu\lceil \xrightarrow{decay} (p + e + \nu\lceil) + \mu\lceil + \rfloor\pi^- + \pi^+ = p + (e + \pi^+) = p + \mu + \Delta E$$

There must exist at least 2 nucleons in a specific amount of time of around ~10^{-12} seconds to interact (magnetron is a very light pion π with rest mass 0.007eV/c^2) with pairs of binding spin proton-neutron that change state with each other and exchange magnetron.
As you can see from the initial proton in an atom nucleus emits a ν neutrino and a μ neutrino, absorbs a ν neutrino and a τ neutrino to trigger the reaction, and results in the pair of binding spin proton-neutron that change state each other and exchange magnetron. In this way, the generation of gravity is provoked by the absorption and generation of a ν neutrino.

The electron on 1S Hydrogen makes an instant jump from a Space Quanta of space, thus at medium speed V=c/137 in a Time Quanta does V·Tce/0.43·10^{-18} m hence around: ~ 898390 instant quantic jump in space from two positions between consecutive Space Quanta into a Time Quanta of the electron.
Space quanta experimental value is $Space_q$ = **4.25·10^{-19}** m. There is no space or time dimension smaller than that, or time shorter than **1.417·10^{-27}** seconds, the interval that is the period between two instant quantic jumps of the photon at speed „c" in a SpaceQanta. The rough estimation of a photon's size=>1/R => 2.55·10^{-23}m.
The time that it takes a γ-ray to travel a distance SpaceQanta is $Tp \approx 1.433 \cdot 10^{-36}$ *sec* ~9% of Planck Time & the space that light travels in a Tp is $l_P \approx 4.781 \cdot 10^{-45}$ *m,* the same ratio ~9% of Planck length.
The minimum distance in the Local Universe outside the Event Horizon (Not into a Black Hole) is SpaceQanta = **4.25·10^{-19}** m and the smallest period is **1.417·10^{-27}** sec due to the granularity of S, T&M, and the smallest mass that we know and is stable is the ν electronic neutrino mass according to neutrino oscillation probably in normal condition around ν mass ~ **0.00039eV/c^2**.
The microparticle of velocity V(r) is 1-time quant waves and 1-time quant physical particle between 2 consecutive values of zero Time flux or the consecutive value of time symmetry is SU(3) of a microparticle (that is where points in space-time where the effective wave function is symmetric with respect to the arrow of time, thus t and –t are providing the same effective wave function).
Between two Time Quants, the spin electron ½ performs a double spin rotation of 720 degrees and reaches the same relative position at the degrees of freedom in space for image viewing. Click on the link below (this can extend to any ½ spin particle):
https://9gag.com/gag/aoNBw1m?ref=fb.s&fbclid=IwAR1yFhQAWTwy9FFagriQnLtVOxp7UCI0FTEuQFosRrSHEn9rCk1Nk5V-MCo
The equation of Time Quanta is provided by a system of the Flux conservation equation (Bohm's Quantum Potential). The electron equation: Electron
As you can see, the Distribution Probability is maximum at the current position in space & time and decreases to radius R where it is null. Electron Time Quanta is: T_{ce} = ρ·rb/c where ρ is "natural units" of rb, thus Tce = 1.765·10^{-19} s. Hence, a more general solution is in the file ElectronFluxT.mw, and the interpretation of the result: $T_{ce} := \frac{r_b}{c}; \#for\ the\ 1\ S\ orbital\ of\ the\ Hydrogen\ atom$
Time is quantified by the tau neutrino with spin quantum number s = ½ and spin projection quantum number m_s = -½, so the process is in evolution with the time arrow positive. Tau neutrino is produced by stars and is also called non-created light "lumină necreată in the Romanian language". It gives a positive time arrow and creates a normal evolution of the natural physical process of our world. An anti-particle tau neutrino has a spin projection quantum number of positive ½; an example is a positron. Feynman called them an electron that goes backward in time; thus, the time arrow is negative, and they fly into the past. The meaning of positive time for almost all processes with increasing entropy, negative time is as above, with the particle going backward in time, and null time means the freezing of all the process time-dependent quantities. The explanation that time is correlated with growing entropy is not quite accurate, for example, living cells don't obey the increasing entropy principle. In the solution above, there is an imaginary component of time that I explain in the file with the link above.

Most of the process has a positive time arrow, and only a few have a spin projection quantum number of ½, which is why antimatter is far less than normal matter. After the Big Bang, there was not an equal amount of matter and antimatter; thus antimatter there was a lot of matter and also a tiny amount of antimatter because of the mass Quark asymmetry and the Big Bang genesis. The initial explosion of the universe was from a huge ultra-large Black Hole with a concentration of quarks of about a mile radius (R_{sEvHo}=1663m), and that's why the normal matter is predominant in the local universe. A very small version of it exists in the center of the Milky Way, the size between a basketball and a soccer ball, a soup of quarks. That is a

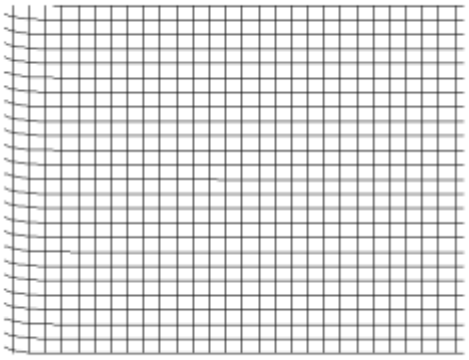
consequence, according to onduscular theory, the gravity force is very high but not infinite in origin because of the granulation of space, thus there is no singularity at 0 points. The Schwarzchild radius of the Black Hole in Sagittarius A (Milky Way) is $R_{SMW} = \frac{2GM}{c^2} = 0.08$ AU (and $RSchw_{Sun}$=2954.13m). The mass of our Black Hole in the Milky Way is $4 \cdot 10^6$ solar mass, and the ratio of a mile and 11.2cm in volume, thus the ratio is $2.9867 \cdot 10^{12}$ of the initial Black Hole in the Local Universe should have $1.24 \cdot 10^{19}$ solar mass. Inside the Gravitational Event Horizon, there is a Temporal Event Horizon with the radius $R_{\tau EvHo}$=75.587m, and within that sphere, Time goes backward because Tau neutrino (τ) within the Temporal Event Horizon. has spin - ½ and "younger" quarks arise.

Also, when the soup of quarks reaches the value of $R_{sEvHo} = 22 \cdot R_{\tau EvHo} = 1663$m, the space collapses into itself when the quark degeneration appears and explodes in the Big Bang.
http://www.michaelvio.byethost8.com/GFtau.pdf
This is the limit from the maximum mass of a black hole mass beyond the pressure of quarks crowded on an enormous pressure that will blow up, and is close to the number of stars in the Local Universe. The Schwarzschild radius of the Initial Black Hole, using the same equation, is about 4.147 million light-years (more accurately equal to R, thus ~$3.923 \cdot 10^{22}$ m), and that was probably the inflation in space and time. Is it correct to say that stars around are attracted and engulfed by the Black Hole, but the Black Hole is not attracted by stars around it because the graviton from the Black Hole does not escape? Thus, the Black Hole in the center of the Milky Way is not traveling because of the attraction of the neighboring Stars; after all, it could be spinning but not moving because of gravity. The minimum distance in the Black Hole of our Galaxy is *$3.524 \cdot 10^{-25}$ m* between the *quarks' mass of $2.5559 \cdot 10^{-31}$ kg*, which are crowded in the center of the BH, so the attraction force is limited to a finite value. There is no singularity in the way of infinite gravity in origin. Thus, the light travels that distance in $1.17548 \cdot 10^{-33}$ seconds and the temperature at the Big Bang of ***$6.5 \cdot 10^{21}$ Kelvin, not*** *Planck Temperature ~10^{32} Kelvin*, using for the dimension of length, the distance between quarks into a Black Hole $3.524 \cdot 10^{-25}$ m. http://www.michaelvio.byethost8.com/PlanckTemperat.pdf
Keeping the same ratio of soup quark in the nucleus of Black Hole, we have the smallest mass of a BH discovered, 3.8 solar masses. The nucleus radius of soup quark should be around ~1mm, and a Schwarzschild radius of around 9.75 km, and inside, a Temporal Event Horizon at the radius $R_{\tau EvHo}$=75.587m. A star with more than 3.8 solar masses, due to the nucleons' degeneration, evolves into a black hole, and if it is lighter than the threshold value, generates a neutron star & if it's lighter than the second threshold value, ≈ 1.39 M⊙, generates a white dwarf, due to the degeneration of electrons.
There are 4 forces: strong & weak nuclear forces, Coulomb's & magnetic, and generalized gravity forces in nature (the fifth force is the torsion force due to spin) that obey the field equation provided by Quantum Torsion Field .http://www.michaelvio.byethost8.com/QFT.pdf
And Flux conservation: http://www.michaelvio.byethost8.com/Flux.pdf
And could be extended to the photon equation, so for photons the onduscular equation.
$\frac{R}{r}\Delta H(r,\theta,z,t) = \frac{1}{c^2}\frac{\partial^2 H(r,\theta,z,t)}{\partial t^2}$ (1) With the initial value at the limit $H_3(R) = 0$. Where R is a fixed distance, the same as in the graviton equation. With the initial condition for photon H(R,θ,z,t) = 0, with "z" cylindrical symmetry, the initial value is null for a cylindrical surface of a cylinder of radius R, a constant distance equal to R = $3.9228 \cdot 10^{22}$ m. In cylindrical coordinates with z-axis symmetry, the Laplacian for the photon, with the initial value at the limit $H_3(R)$=0.
And we have the sinusoidal solution $H_4(z)$ from the equation. $\frac{\partial^2 H4(z)}{\partial z^2} = -\nu^2 H4(z)$ (8)
With dependence on the z-axis: $H_4(z) = \sin\left(\frac{E}{h\nu}z + \varphi\right)$ where h = Planck constant, E photon energy, and φ the phase **with $H_4(z)$ and u(t) a dimensional function**.
The plot suggests the fact that we change the variable $h(r) = g(\rho)\frac{R - \rho \cdot rb}{R}$ as into the Quantum Torsion Field http://www.michaelvio.byethost8.com/QFT.pdf thus the distance between 2 zero of $H_3(r)$ is radius Bohr that concludes the Time Quant is **$T_c = r_b/c$** equal to **$Tc = 1.765 \cdot 10^{-19}$ sec.**
Because we have the total time = R/c multiplied by the ratio of changing variable rb/R, thus
$Tc = \frac{rb}{R} \cdot \frac{R}{c} = 1.765 \cdot 10^{-19}$ sec, the issue is the value of the photon quant Tc plot as below.
The Photon equation H(r,z,t) in cylindrical coordinates with axial cylindrical z- axis symmetry:
f(r,z,t) = $H_3(r)$ $H_4(z)$ u(t)

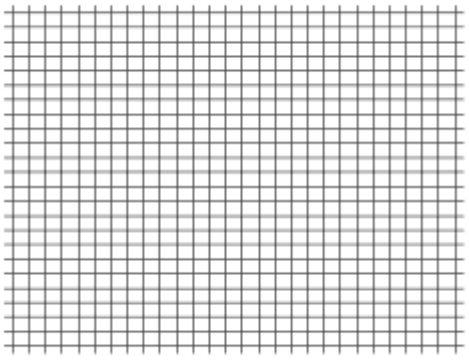
Photon equation is with R = $3.9228 \cdot 10^{22}$m and wavelength 3nm÷30μm as in file http://www.michaelvio.byethost8.com/PhotonAi.pdf
The suppositions that I make in this paper are in the file Supposition.pdf.
Thus, for electrons, considering the mass relativistic effect at the first orbital "s" with V=α·c "α=1/137" is the fine-structure constant.
The exact value of the Effective Wave Function $\psi_{(r,t)}$ of the electron is in the file ElecSLVAR.mw, where R = $3.9228 \cdot 10^{22}$ m; V=α·c velocity of microparticle and c speed of light ~~ħ~~ normed Plank. There is a simplified version below (19): http://www.michaelvio.byethost8.com/ElectronFlux1s.pdf

The quantum nature of space-time

The Local Universe is finite and has a radius of r = $15.53292368 \cdot 10^{25}$ m, a volume of $(4/3)\pi r^{3,}$ and supposing that the Space Quanta is a cube of $4.25 \cdot 10^{-19}$ m, thus in the approximation of uniform density, we have $2.04494 \cdot 10^{134}$ of volume space unit, ignoring that the space quanta dimension is compressed in Black Hole and at the border of the Local Universe.
The light is a transversal wave moving from one space unit to another up to the margin of the LU position, with the same number of instant jumps between adjacent space units. The γ coherent beam is a longitudinal wave and shifts the space units almost instantly through the margin of the Local Universe.
The Activate particle and $Particle_s$ are associated with longitudinal waves and have the same mechanism of propagation. Thus, "Spacetime tells matter how to move, and matter tells spacetime how to curve," and the movement of a microparticle is instant between Space Quanta.
The propagation of the transversal wave image at the speed of light:



And the longitudinal wave in the case of finite velocity propagation:



But space has very small compressibility, high density of mass, and a nonzero value of the stress tensor, which could bend the space.

The Space Quanta (unit of space) varies in a Black Hole. This unit in our *Galaxy becomes* $3.524 \cdot 10^{-25}$ m due to the extreme pressure in the Sagittarius A BH.
The space-time texture supports field propagation for gravity, which is a transversal wave ν with rest mass 0.00038eV/$c^{2,}$ the velocity is 0.9999999932·c because of $E_\nu = \frac{m \cdot c^2}{\sqrt{1-\frac{v^2}{c^2}}} = \frac{0.00038eV}{\sqrt{1-\frac{v^2}{c^2}}} = 3.259eV$
The transversal wave γ-ray is longitudinal and shifts the space units almost instantly through the margin of the Local Universe. But the space is almost incompressible, and the speed of propagation is ≈<$3 \cdot 10^{17}$m/s
The equation of transversal speed propagation in liquid is $V = \sqrt{\frac{\chi}{\rho}}$ thus χ comprehensive-ty per ρ density but in the supposition above and the void space density of $9.9 \cdot 10^{-30}$ grams per cubic centimetres ($9.9 \cdot 10^{-27}$ kg/m^3) thus V=$1.054 \cdot 10^{17}$ $\sqrt{\chi}$ velocity in m/s.
The compressibility modulus of space χ = 0.09070366748 Pa, thus N/m velocity is V ≈$3 \cdot 10^{17}$ m/s.
https://www.degruyter.com/document/doi/10.1051/978-2-7598-2574-5.c034/html
Bottom line, the γ-ray spreads within a 2R radius is one PTU.
http://www.michaelvio.byethost8.com/PlanGam.pdf
If we point to the cold spot on CMB with a γ ray interfering with the visual photon to create an interferential figure, the delay between those 2 Universes should be over 32 ½ years (~1 billion seconds) and changing with respect to other directions.
We start from the supposition that light is the fastest beam that moves from one space quanta to another, but in the case of γ rays, the wave moves only a space quantum; the others are shifting to one direction in PTQ.
PTQ = SQ/c.
We start from the supposition that light is the fastest beam that moves from one space quanta to another, but in the case of γ rays, the wave moves only a space quantum; the others are shifting to one direction in PTQ.
PTQ = SQ/c, so PTQ=$1.417 \cdot 10^{-27}$ sec.
The maximum velocity is V ~ $3 \cdot 10^{17}$ m/s, but in practice, the moving physical object should be within the R distance R = $3.9228 \cdot 10^{22}$ m; thus, the real velocity is less than $V_{practic}$ = < $3 \cdot 10^{14}$ m/s, so ~10^6 times greater than the speed of light. The calculus of PTQ is in the PSTc.mw
http://www.michaelvio.byethost8.com/PSTc.pdf

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