The flux conservation equation

The flux equation of the electron is as in Bohm's Quantum Potential of the probability density, with the difference that Bohm was wrong in two aspects:
1) He presumed that the wave of probability density guides and pushes the particle – not quite so.
I guess that the Tau neutrino τ creates a temporal ionization that raises the energy (with tenths of eV) for a brief period of time $T_{quant,}$ the particle vanishes from the impact with τ, becoming a wave, and after $T_{quant, the}$ particle appears in the place with the highest probability density, thus materializing into the same particle but in another place.
2) Also, he presumes that the Schrodinger equation is an "ontological" view of reality, thus part of it – not quite so.
I guess that the onduscular equation describes reality in an "epistemic" way; thus, it's not a part of reality, only a mathematical one, that predicts reality well.
The onduscular wave system of particles equation for many entities (microparticles that are entangled) is nonlocal, thus I agree with Bohm - De Broglie's theory.
I) The onduscular equation provides an epistemic description of reality, with real values.
II) It is not a part of reality itself, but a mathematical tool.
III) Its role is to describe and correctly predict the behavior of reality, closer to reality than the Schrödinger equation with complex values, over an extended spatial domain. The onduscular equation describes reality in an epistemic way, meaning it is about our knowledge of reality, not reality itself. In other words, the equation is just a mathematical tool that makes very good predictions about what happens in reality - it has real values, but it is not Reality itself.
The flux conservation equation for electrons, the equation of continuity of probability density, "The Theory of Space, Time and Gravitation" of Vladimir Aleksandrovici Fock (66.09) page 248 is:
https://archive.org/details/the-theory-of-space-time-and-gravitation-v.-fock-n.kemmer/page/247/mode/2up

$$\boxed{\frac{\partial^2 P}{\partial t^2} - V^2\frac{\partial^2 P}{\partial r^2} = \frac{V^2}{R}P}$$

The flux equation of the proton is as in Bohm's Quantum Potential of the probability density: Electron.
With initial condition P(2R,0) = 0.

For the time flow Flux Tau neutrino, we have the second order (wave equation) $\frac{\partial^2 P(r,t)}{c^2\partial t^2} - \frac{\partial^2 P(r,t)}{\partial r^2} = 0$
With initial condition P(R,t)=0 and spherical cords symmetry;
Time flow ~ flux/ surface unit P(r,t) /$4\pi r^2$:

$$F(r,t) = \frac{A[(r-r_0)(r-R)+\varepsilon t + c^2t^2]}{4\pi r^2}$$

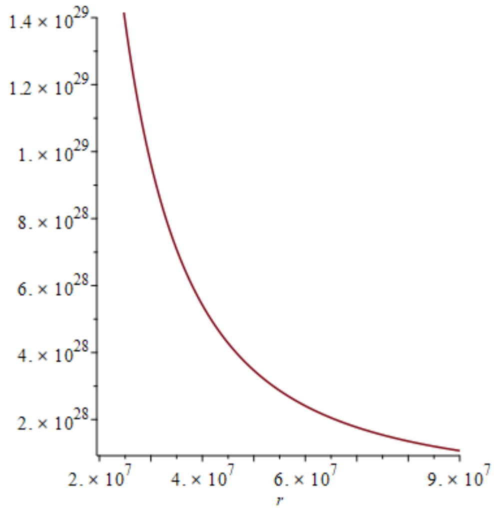
The perception of time on Mars is slower than on Earth, considering the initial value of time t = 500s for the Earth.
Thus, on each day on Mars, time loses ~14.6 milliseconds, and time is slow on a Martian depending on the distance to the Sun (249 million km or 206 million km). The time shift is detectable with an atomic watch.
Thus, $7.52381\cdot10^9$ of Time Quanta's each one equal to $1.765\cdot10^{-19}$ sec according to Tau.pdf
Thus, per day, the time shift is 14.6 milliseconds between Mars and Earth relative to the distance from the Sun.
The flux equation for electronic neutrinos, considering spherical coordinates symmetry & the speed of the graviton equal to light speed, is for (electronic neutrino). The flux second-order wave equation is:
$\frac{\partial^2 P(r,t)}{c^2\partial t^2} - \frac{\partial^2 P(r,t)}{\partial r^2} = 0$
With initial condition P(2R,t)=0 si R= $3.9228\cdot10^{22}$;
Thus, the gravitational force F_G ~flux/ surface unit = P(r,t) /$4\pi r^2$ Gravitational forces exactly for radius below *r* ≈<*R/20* m:

$$\frac{P(r,t)}{4\cdot\pi\cdot r^2} = Newtonian\ force$$

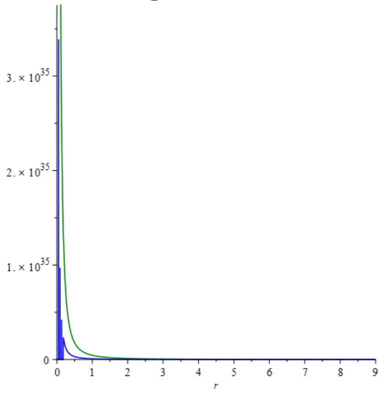
Considering the initial value of time t = 0, the value of Earth's gravitational force.

And with boundary condition P(2R,0) = 0

The quantum gravitational attraction force between nucleons that change electronic neutrino.
Thus, the quantic gravitational forces in Newton's law between 2 nucleons that change ν neutrino (gravitons) are so, the quantic gravitational attraction force in Newton's law between 2 nucleons at radius r (in meters) may be approximately: Fgq $\sim 2 \div 4 \cdot 10^{-64}/r^2$ (Newtons). As you can see, at "r" exceedingly big order of $2 \cdot R$, the force is equal to 0. Over that distance of 2R, the model must be rewritten. The gravitational force is as follows, with the correspondence: Thus, 1 Newton (102g) of trust means the attraction between ~ $6.14244 \cdot 10^{25}$ nucleons and Earth. The plot of the gravitational Earth force is from ground level $6.38 \cdot 10^{6}$ m to $9 \cdot 10^{7}$ m:



Also, there are 4 forces from the atomic particle level: proton, electron, neutron => magnetic, electrostatic (Coulombic), strong nuclear, and generalized gravity forces in nature that obey the field equation provided by Quantum Torsion Field. As you can see, at "r" exceedingly small, the first fixed term of F_{g1} with the negative value gives the strong and weak force, and at a large radius, order of $2 \cdot R$, the force is equal to 0.
The phonon (audion) particle equation is on spherical coordinates with spherical symmetry:
$\frac{Rb}{r}\Delta f(r,t) = \frac{1}{V^2}\frac{\partial^2 f(r,t)}{\partial t^2}$ With R = $3.9228 \cdot 10^{22}$m length constant. With normed propagation constant b, "V" the speed of phonon in the environment, and the Dirichlet condition is f (R, t) = 0 for constant spatial distance R, and f (r, t) is the effective onduscular wave function of the phonon particle depending on radius r and time t. The solution is with flux conservation of second-degree order for the phonon with the onduscular equation. The phonon flux equation with initial condition P(R,t)=0 and V= 346m/s, the speed of sound in air, with the phonon flux for null time t_0 is P_{fp}:



The flux equation for Entropy as a virtual particle, considering spherical coordinates symmetry & the speed equal to the speed depending on the particle, the flux second-order wave equation is: $\frac{\partial^2 P(r,t)}{c^2 \partial t^2} - \frac{\partial^2 P(r,t)}{\partial r^2} = 0$
With initial condition P(2R, t)=0, R = $3.9228 \cdot 10^{22}$ m, where P(r,t) represents the flux entropy. Thus, the entropy change ~flux/ surface unit = $P(r,t)/4\pi r^2$
The flux conservation equation for thermal particles, the probability density is:
And considering V = constant, we have:

$$\frac{\partial^2 P(r,t)}{V^2 \partial t^2} - \frac{\partial^2 P(r,t)}{\partial r^2} = \frac{P(r,t)}{R}$$

With the initial condition P(2R,0) = 0, considering the mass of the thermal particle equal to the electron mass. $P_{Therm}(r,t)$

For the muon neutrino, the flux equation for μ neutrino considering spherical coordinates symmetry & the speed of graviton equal to light speed is for (electronic neutrino). The flux second-order wave equation is:

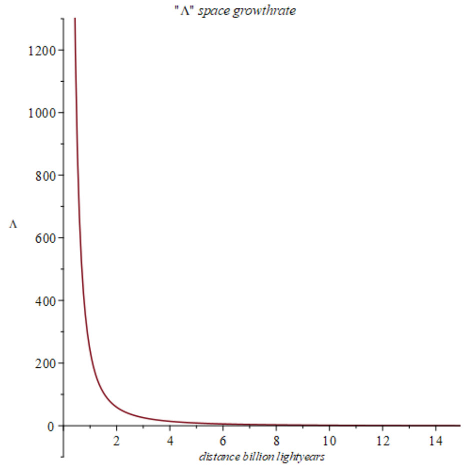
$$\frac{\partial^2 P(r,t)}{c^2 \partial t^2} - \frac{\partial^2 P(r,t)}{\partial r^2} = 0$$

With initial condition $P(2R_s, t) = 0$ with $R_s = 7.766461840 \cdot 10^{25}$ m (8.209331978billion lightyears); Thus, the solution of the Λ Space flux/ surface unit $\Lambda_{flux} = P(r,t) / 4\pi r^2$ so $\frac{P(r,t)}{4 \cdot \pi \cdot r^2}$

And with initial condition t=0 μ Neutrino

With the meaning of space growth rate for R_s =8.2 and c = 3:

With the meaning of the space growth rate:



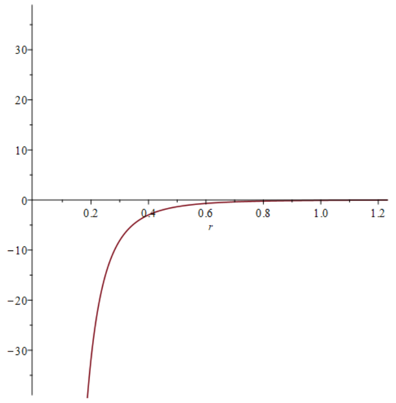
With the meaning of the space growth rate plot for R_s=8.2 and t=0: The space growth.

The space growth rate decreases parabolically with radius and is equal to 0 at 16.418 billion light-years, which is the border of our Local Universe. Link http://www.michaelvio.byethost8.com/FluxLamda.pdf

For a monopole, particles that change the magnetron's Flux equation are in cylindrical coordinates symmetry: $\frac{\partial^2 P(r,z,t)}{c^2 \partial t^2} = \frac{\partial^2 P(r,z,t)}{\partial r^2}$ where $P(r,z,t) = H(r)H_1(z)u(t)$.

The magnetic force is proportional to flux on the lateral surface /(2πrL), thus Fmag at t =0.

And the Magnetic Force with f(r)= H(r)/r at t = 0 plot for R=3700, c=30, k =1 and r = 1/R÷R/3000:



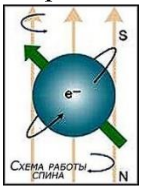
We can see the Magnetic Force decrease very abruptly; thus, the magnetron is the particle of magnetic forces, "Strong Nuclear Forces," and chromodynamics must be rewritten. Thus, the magnetron I make the supposition monopole is a pion with a lower rest mass, thus a meson π^+ with a rest mass of $1.369 \cdot 10^{-8}$ smaller than the electron mass. The electrostatic repelling between nucleons combined with the attractive gravitational force and attraction quantic magnetic forces, 3 balances the pulsating electrostatic force of repulsion that changes every ~ 10^{-11} sec.

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

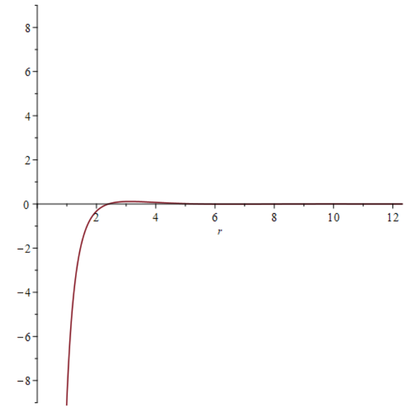
$$n + \check{|}\tau \xrightarrow{\beta+\ decey} p + \pi^{-}\hat{|} + \mu\hat{|} + \nu\hat{|} = (p + \check{|}optoelect + \nu\hat{|}) = n + \nu\hat{|} + \mu\hat{|} = n$$

For detailed u(t) at instant time t < > 0 with dependence on z-axis: $H_1(z) = \sin(E\cdot z/h_m+\varphi)$ where $h_m = \sim 2.585\cdot 10^{-8}$ eVs
F_{mag} magnetic force is: http://www.michaelvio.byethost8.com/FluxMag.pdf

The value of the repelling proton may be approximated with the Quantum Electrodynamic magnetic forces given by the Lagrangian, even if we do not know the concrete value of the magnetic force, but must obey the boundary condition and thus must be 0 on H (2R) = 0 http://www.michaelvio.byethost8.com/LagrangianQED.pdf
The photon particles in the flux equation are in the cylindrical coordinates' symmetry:
$\frac{\partial^2 P(r,z,t)}{c^2 \partial t^2} - \frac{\partial^2 P(r,z,t)}{\partial r^2} = 0$, where P(r,z,t)= $H(r)H_1(z)u(t)$. The force between two plates that changes the torsion particle is very small and is also known as the Casimir effect.
http://www.michaelvio.byethost8.com/FluxPhoton.pdf
The 5th force is generated by the P_{To} the torsion field that was suggested by Pr. Ioan N. Popescu as Gravitovortex some 40 years ago. The P_{To} torsion field is generated by the synchronized spin precession of a group of particles. All particles are "trembling", and the reason is the Torsion Particle. The electrons, protons, neutrons, τ, μ, ν neutrino, phonons, thermal particles, (monopole) magnetrons, photons, P_{To}, γ-particle, the torsion field of an electron is illustrated:



The P_{To} equation in cylindrical coordinates symmetry: $\frac{\partial P(r,z,t)}{c^2 \partial t^2} - \frac{\partial P(r,z,t)}{\partial r^2} = 0$
Where P(r,z,t)= $H(r)H_1(z)u(t)$ for approximation the torsion force is proportional to flux/(2πrL), thus F_{PTo} at t = 0 we have ν the frequency Link: http://www.michaelvio.byethost8.com/FluxPto.pdf
The P_{To} is responsible for space expansion? To answer what particle is responsible for the attraction of galaxies within 2R=8.293 million light-years and outside 2R and within 16.4186 billion light-years, the forces change sign and result in a rejection force between distant galaxies, we must go deeper. My answer is yes, P_{To} generates attraction and rejection depending on distance, which was explained by the Gravitovortex revealed by Pr. Dr. Ioan N. Popescu, 40 years ago, in Gravity.
And the Torsion Force with flux is F_{PTo}=H(r)/4πrL plot for R=70, V=3000, ν =20 and r = 1/R ÷R/500 is an explanation for Casimir phenomenon:



The torsion force is the 5th force that could explain the expansion of the galaxy for distances higher than 2R = 8.3 million LY and at short distances within the Local Cluster, thus most galaxies in the Local Cluster emerged as bigger galaxies Andromeda, Triangulum, Large and Small Magellanic Cloud in collision with Milky Way in ~2 billion years, the Maffei 1, & Maffei 2 Galaxy (NGC 1428 & NGC 1425) **…**

Particle Symmetry	Boundary condition (Dirichlet) Initial Value	Particle Equation	Boundary condition (Dirichlet) Initial Value	Flux equation
Proton Spherical	g(2R) = 0	$\frac{2m_p}{h^2}\left(E-\frac{e^2}{r}+\frac{L^2}{2mr^2}\right)\cdot f(r,t)+\frac{R}{r^2}\frac{\partial^2(r\cdot f(r,t))}{\partial r^2}=\frac{1}{V^2}\frac{\partial^2 f(r,t)}{\partial t^2}$	P(R,0) = 0	$\frac{\partial P(r,t)}{V\partial t}+\frac{\partial P(r,t)}{\partial r}=0$
Electron Spherical Plot	g(R) = 0,	$\frac{2m}{h^2}\left(E+\frac{e^2}{r}-\frac{L^2}{2mr^2}\right)f(r,t)+\frac{R}{r^2}\frac{\partial^2(r\cdot f(r,t))}{\partial r^2}=\frac{1}{V^2}\frac{\partial^2 f(r,t)}{\partial t^2}$	P(2R,0) = 0	$\frac{\partial^2 P(r,t)}{V^2\partial t^2}+\frac{\partial^2 P(r,t)}{\partial r^2}=\frac{P(r,t)}{R}$
Neutron Spherical	g(R) = 0	$\frac{2m_n}{h^2}(E+\frac{L^2}{2m_n\cdot r^2})\cdot f(r,t)+\frac{R}{r^2}\frac{\partial^2(r\cdot f(r,t))}{\partial r^2}=\frac{1}{V^2}\frac{\partial^2 f(r,t)}{\partial t^2}$	P(R,t)=0	$\frac{\partial^2 P(r,t)}{V^2\partial t^2}-\frac{\partial^2 P(r,t)}{\partial r^2}=\frac{P(r,t)}{R}$
Magnetron (monopole) Cylindrical Plot	f(2R,z,t) =0	$\frac{R}{r}\Delta H(r,z,t)=\frac{1}{c^2}\frac{\partial^2 H(r,z,t)}{\partial t^2}$	P(2R)=0 D[1](f)(0,0,0) = R & *Dirac quantization Gauss law*	$\frac{\partial^2 P(r,z,t)}{c^2\partial t^2}=\frac{\partial^2 P(r,z,t)}{\partial r^2}$
Photon (Light) Cylindrical Plot	f(R,z,t) = 0	$\frac{R}{r}\Delta H(r,z,t)=\frac{1}{c^2}\frac{\partial^2 H(r,z,t)}{\partial t^2}$	P(R,z,t)=0 Gaussian distribution’s	$\frac{\partial^2 P(r,z,t)}{c^2\partial t^2}=\frac{\partial^2 P(r,z,t)}{\partial r^2}$
Graviton = ν Electronic Neutrino Spherical Plot	g(2R) = 0	$\frac{R}{r}\Delta f(r,t)=\frac{1}{c^2}\frac{\partial^2 f(r,t)}{\partial t^2}$	P(2R,t)=0 $\frac{f(r,0)}{4\pi r^2}\approx$ *Newton Law for r <R/20*	$\frac{\partial^2 P(r,t)}{c^2\partial t^2}-\frac{\partial^2 P(r,t)}{\partial r^2}=0$
Tau τ Neutrino (Time) Spherical Plot	g(R) = 0	$\frac{R}{r}\Delta f(r,t)=\frac{1}{c^2}\frac{\partial^2 f(r,t)}{\partial t^2}$	P(R,t) = 0 $\int P(0,t)\,dt=$ 2.918 Gly $P(r_0,0)=0$; r_0 radius smallest Black Hole	$\frac{\partial^2 P(r,t)}{c^2\partial t^2}-\frac{\partial^2 P(r,t)}{\partial r^2}=0$
μ Neutrino Spherical Plot	$g(2R_s)=0$ $\int_{r_{min}}^{2R_s}F(r)\,dr=\frac{c}{H_0}$	$\frac{R_s}{r}\Delta f(r,t)=\frac{1}{c^2}\frac{\partial^2 f(r,t)}{\partial t^2}$	$P(2R_s,t)=0$ $\frac{P(r,0)}{4\pi r^2}\approx$ *Hubble constant.*	$\frac{\partial^2 P(r,t)}{c^2\partial t^2}-\frac{\partial^2 P(r,t)}{\partial r^2}=0$
Particle $_\gamma$ (Gamma-ray) Spherical	g(2R) = 0 $V\approx 10^9\cdot c$	$\frac{R}{r}\Delta f(r,t)=\frac{1}{V^2}\frac{\partial^2 f(r,t)}{\partial t^2}$	P(2R,t) = 0	$\frac{\partial^2 P(r,t)}{V^2\partial t^2}-\frac{\partial^2 P(r,t)}{\partial r^2}=0$
Torsion Cylindrical	f(2R,z,t) =0	$\frac{R}{r}\Delta H(r,z,t)=\frac{1}{V^2}\frac{\partial^2 H(r,z,t)}{\partial t^2}$	P(2R) = 0	$\frac{\partial^2 P(r,z,t)}{V^2\partial t^2}-\frac{\partial^2 P(r,z,t)}{\partial r^2}=0$
Phonon Spherical	g(R) = 0,	$\frac{R}{r}\Delta f(r,t)=\frac{1}{V^2}\frac{\partial^2 f(r,t)}{\partial t^2}$ V= 346m/s	P(R,t) = 0	$\frac{\partial^2 P(r,t)}{V^2\partial t^2}+\frac{\partial^2 P(r,t)}{\partial r^2}=\frac{P(r,t)}{R}$
Thermal Particle Spherical Plot	g(2R) = 0	$\frac{2m}{h^2}(E+\frac{L^2}{2mr^2})\cdot f(r,t)+\frac{R}{r^2}\frac{\partial^2(r\cdot f(r,t))}{\partial r^2}=\frac{1}{V^2}\frac{\partial^2 f(r,t)}{\partial t^2}$	P(2R,t) = 0 Gaussian distribution’s $V=\frac{\partial f(r,t)}{\partial t}$ m = electron mass	$\frac{\partial^2 P(r,t)}{V^2\partial t^2}-\frac{\partial^2 P(r,t)}{\partial r^2}=\frac{P(r,t)}{R}$
Activate Entanglement Cylindrical	f(2R,z,t) =0	$\frac{R}{r}\Delta H(r,z,t)=\frac{1}{V^2}\frac{\partial^2 H(r,z,t)}{\partial t^2}$	P(R) = 0	$\frac{\partial^2 P(r,z,t)}{V^2\partial t^2}-\frac{\partial^2 P(r,z,t)}{\partial r^2}=0$

Particle S (Syncron) Ppherical	g(R) = 0	$\frac{R}{r}\Delta f(r,t) = \frac{1}{V^2}\frac{\partial^2 f(r,t)}{\partial t^2}$	P(R,t) = 0	$\frac{\partial^2 P(r,t)}{V^2 \partial t^2} - \frac{\partial^2 P(r,t)}{\partial r^2} = 0$

The velocity V for gamma ray, Activate (Entanglement) & Torsion is approximately $\sim 3 \cdot 10^{17}$ m/s.

Date 30 Apr. 2026