The suppositions that I make in the papers

The onduscular equation $\frac{2m}{\hbar^2}(E-U(r))rf(r,t)+\frac{R}{r}\frac{\partial^2(rf(r,t))}{\partial r^2}=\frac{1}{V^2}\frac{\partial^2 rf(r,t)}{\partial t^2}$ (1) is valid in both spherical and cylindrical coordinates; it emerges from a combination of Schrodinger, which is the first degree with respect to time, and the Klein-Gordon temporal equation of the second degree with respect to time. Also, we chose a parameter R, thus for a small radius $r_{Bohr,}$ for an atomic value to coincide with the Schrodinger equation exactly and predict the evolution of the wave function to huge values of r about the 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 microparticle in volume dV. Schrodinger's equation is (2):

$\frac{2m}{\hbar^2}(E-U(r))f(r,t)+\frac{\partial^2(f(r,t))}{\partial r^2}=ih\frac{\partial f(r,t)}{\partial t}$ & Klein-Gordon is $\frac{2m}{\hbar^2}f(r,t)+\frac{\partial^2(f(r,t))}{\partial r^2}=\frac{1}{c^2}\frac{\partial^2 f(r,t)}{\partial t^2}$ (3)

Thus, eq. (1) for m = 0 is a wave equation with variable parameters, and it seems to be true.

$\frac{R}{r}\frac{\partial^2(rf(r,t))}{\partial r^2}=\frac{1}{V^2}\frac{\partial^2 rf(r,t)}{\partial t^2}$ (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),

This is the equation for any micro particle that we take for granted. We obtain equation (1) also for v = c thus m = 0, we have equation (5). See: http://www.michaelvio.byethost8.com/QFT.pdf

The effective wave function of the 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 micro particle 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

As you can see function $f_1(r,t) = rf(r,t) = rg(r)u(t)$ is the Onduscular Wave Function (OWF) multiplied by r denoted f(r,t) in the case of graviton equation and other particles that travel with the speed of light so we call it Effective Onduscular Wave Function or EOWF. The EOWF has the dimension of $[L^{-1/2}]$, and OWF has the dimension of $[L^{-3/2}]$ with separate variables, and g(r) has the dimension of $[L^{-3/2}]$, u(t) is dimensionless as in the Schrodinger equation. Both equations, Onduscular and Schrodinger, have almost the same value of the function that depends on r, g(r), multiplied by a dimensional exponential factor that depends on time t. The relation between f1(r,t) EOWF and f(r,t) OWF is $f_1(r,t) = rf(r,t) = rg(r)u(t)$ thus we calculus EOWF which is easier, and we return to the OWF by dividing by r the function $f_1(r,t) \Rightarrow f(r,t) = f_1(r,t)/r$. The relativistic form of the onduscular equation of one particle is Lorentz invariant for the velocity of the particle V < c:

$\frac{2m}{h^2}(E-U(r))f(r,t)\sqrt{1-\frac{V^2}{c^2}}+\frac{R}{r}\frac{\partial^2(f(r,t))}{\partial r^2}=\frac{1}{V^2}\frac{\partial^2 f(r,t)}{\partial t^2}$

http://www.michaelvio.byethost8.com/struyve.pdf

Also, the onduscular wave equation is linear (the equation contains only the wave function, and its derivative is not raised to any power). Thus, if we have two solutions of it, a linear combination of the solutions for one particle should also be a solution, and that is superposition.

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, and between states executes an instant quantum jump from the successive position in space due to the granularity of space.

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.

1) In the Mach-Zehnder interferometer, when dividing the light beam in the case of the superposition experiment, a photon enters, and one photon exits on one path, and after a brief period, another photon enters on the other light path, so the probability is 50%-50%. Thus, if the beams unite and the 2 photons meet if the paths are equal, they form the interference pattern, if the interaction time is of the order of the time quanta
2) When a photon passes through the slit of the order of hundreds of nm ~ the wavelength of light, in the double-slit experiment, penetrating through the very close slits, it transforms from a particle into a probability wave, passing simultaneously through both slits as a wave and producing interference on the screen.
3) When an electron passes through the slit of the order of tenths of μm in the double slit experiment, penetrating through the very close slits, it transforms from a particle into a probability wave, passing simultaneously through both slits as a wave and producing interference on the screen.
4) In the double-slit experiment, when the passage of an electron through a slit is observed with a device and the photons from the visible optical window (400 -700 nm) are measured optically if it has passed through that slit, does the energy transferred by the photon to observe interrupt the temporal ionization of the electron that no longer transforms into a probability wave, disappearing the interference, the threshold value is 1.34μm.
5) If the wavelength of the observation photons is higher than the threshold value for electrons, the passage from particle to wave is no longer disturbed, and electron interference occurs.
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, magnetrons for magnetic forces, and tau neutrino for time which is a Dirac particle 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's equations inference document
The initial derivative = R, the boundary condition f(R)=0 or f(2R)=0, or another initial condition was determined by dowsing for photon with the dimension dim d = $[L^{-3/2}]$ thus $H_3(r)$ and g(r) has dimension dim $[L^{-3/2}]$ the dimension of wave function and u(t) a dimensional function.
The flux conservation and continuity equation of the first degree $\frac{\partial p(x,t)}{\partial t} + \frac{\partial (p(x,t)\cdot V(x))}{\partial x} = 0$ is known in the literature as the transport equation to see Brian Green's "The Hidden Reality" Notes Chapter 8, or any Quantum Mechanics book, probability conservation equation.
https://quantummechanics.ucsd.edu/ph130a/130_notes/node127.html
The second-degree wave equation $\frac{\partial^2 P(r,t)}{c^2 \partial t^2} - \frac{\partial^2 P(r,t)}{\partial r^2} = 0$ is for the propagation of the probability wave for the graviton, tau neutrino, and muon neutrino. Proton and electron have a nonhomogeneous wave equation. Considering V = constant, we have the system with an inhomogeneous wave equation & the equation of continuity: $\frac{\partial^2 P(r,t)}{V^2 \partial t^2} - \frac{\partial^2 P(r,t)}{\partial r^2} = \frac{P(r,t)}{R}$ & $\frac{\partial P(r,t)}{V \partial t} + \frac{\partial P(r,t)}{\partial r} = 0$ with initial condition P(R,0) = 0 and another IC as in QuEnWaPart.pdf, see "The Theory of Space, Time and Gravitation" of Vladimir Aleksandrovici Fock, the electron & proton initial conditions are logically deduced and dowsing verified.
https://archive.org/details/the-theory-of-space-time-and-gravitation-v.-fock-n.kemmer
The supposition for the paper T&SQ.pdf is:
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.
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.
1) The ratio between Rs/R is the same as proton diameter/dim quark = 3959.6188; Considering proton charge radius $8.41419 \cdot 10^{-16}$ m and dim quark = $4.25 \cdot 10^{-19}$ m ($4.3 \cdot 10^{-19}$ m) MaxRadius.pdf
The space quants are the dimension of the Quark $(0.425\text{-}0.43) \cdot 10^{-18}$ m see the link below: "($4.3 \cdot 10^{-19}$ m) The 95% C.L. upper limit for the quark radius presented here is almost a factor of two better than the previous

ZEUS limit of $0.85/2 \cdot 10^{-16}$ cm, based on the HERA I data" thus the value should be around ~ $4.27 \cdot 10^{-19}$m https://arxiv.org/abs/1604.01280

2) The mass quant is the same ratio 6553 with respect to nucleon mass, as the ratio of electron radius $2.81794 \cdot 10^{-15}$ m and space quanta (the Quark dimension of $0.425 \cdot 10^{-18}$ m). Ratio $(2.81794/0.425) \cdot 10^3 = 6553$ Thus mass quant equal to Mass Quant = neutron mass/6553 = $2.55597 \cdot 10^{-31}$ Kg. is equal to ~0.143377MeV/c^2)

3) The cold spot in the CMB we have contact with our Neighbor Local Universe.

4) The photon time quanta equal to a period that the photon travels the distance r_B Bohr radius, the radius of the first orbital 1 "S" =$1.765 \cdot 10^{-19}$ sec, and more generally, the period between two positions in space-time where we have $\frac{\partial f(r,t)}{\partial t} = 0$ of any micro particle.

5) The Higgs Boson &Muon Neutrino are bonded together in the mass matrix, and the process of its dispersion in space and the existence of space itself.

6) The initial explosion of the universe was from a huge ultra-large Black Hole with a concentration of quarks of about a mile radius & in the center of the Milky Way, there is a soup of quarks the size between a basketball and a soccer ball, which was also measured.

7) The process that takes place in the nucleus of the atom, where the abbreviations are: the sign ⌈ Is emission and ⌋ is absorption $p + \rfloor\nu \xrightarrow{transf} n + posit \xrightarrow{decay} (p + e + \nu\lceil) + posit = p + (e + posit) = p$ and $p + \rfloor\tau + n \xrightarrow{transf} 2n + posit + \nu + mag + \mu\lceil \xrightarrow{decay} (p + e + \nu\lceil) + n + posit = p + \mu\lceil + e + posit + n = p + n$

8) The smallest mass that we know and is a stable particle is the ν electronic neutrino mass according to neutrino oscillation probably in normal conditions around ν mass ~ 0.00038eV/c^2 and the energy of graviton from the Sun is 0.025eV, the tau neutrino mass ~ 0.188eV/c^2 and the energy of 0.9245eV the muon neutrino mass ~0.0087eV/c^2 and energy 0.18eV according to the calculation of the interpretation experiment on page http://www.michaelvio.byethost8.com/Hologram.pdf & grating.pdf and they travel almost at the speed of light depending on the rest mass and energy.

9) The thermal particle has an electron mass with no charge and obeys the onduscular equation with Dirichlet conditions: f (2·R, t) = 0 for EOWF.

10) The maximum propagation speed of a transversal wave is the light speed c, the longitudinal wave γ- ray, and those corresponding Activate particles (Entanglement)… the supposition that light is the fastest beam that moves from one space quanta to another but in the case of γ ray the wave moves only a Space Quanta (SQ = $4.25 \cdot 10^{-19}$ m) the others are shifting to one direction in Primordial Time Quanta (PTQ) thus: PTQ = SQ/c.

11) The rest mass of the Tau neutrino τ is revealed in the Lamb experiment (0.18897eV/c^2), and the exact values of muon and electron neutrino rest mass are: 0.0884904 & 0.00039682 eV/c^2 http://hyperphysics.phy-astr.gsu.edu/hbase/quantum/Lamb2.html#c1

The suppositions for the other papers, Hologram.pdf, QSpaceBH.pdf, and RedShift.pdf… are:

1) The Local Universe is 13.79 billion years old, and the Milky Way is 13.4 billion years old MaxRadius.pdf

2) The highest commoving distance in the Local Universe is 95.82 billion light-years across the LU.

3) The Big Universe is at least ~ 37 trillion light-years and contains the Local Universe.

4) Nothing can escape from the Local Universe: neither light nor gamma rays.

5) The energy mass and the particle speed uniquely determine its time quanta.

6) Any microparticle is a one-time quanta particle and one-time quanta waves of probability and has 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.

7) Nucleons and all micro particles receive quanta of energy for every predetermined period, thus for a Hydrogen atom at room temperature of around ~$6 \cdot 10^{-11}$ sec, the nuclear reactions and electron: $e + \rfloor\tau \xrightarrow{trans} e + mag + \mu\lceil + \Delta E$. http://www.michaelvio.byethost8.com/Tint.pdf

8) The energy of the Tau neutrino (τ) from the Sun is around ~0.9eV and rest mass ~0.188eV/c^2 and we suppose that all the stars that glow emit τ with about the same energy in any direction in the range of intensity and any angle in space in the Local Universe +/- 0.3-0.4%.

9) The suppositions are:
a) The electromagnetic radiation of black-body radiation is in thermal equilibrium.
b) The photons do not interact with one another (the superposition principle), so the radiation may be regarded as a photon gas like an ideal gas.
c) The distribution of photons among the various quantum states with definite values of the momentum and energies
ε = ~~h~~·ω is given by Planck's distribution law of black body for photons of Bose statistics is (according to 63.3) [1]. The energy per quanta T_q is: $\boldsymbol{E_{vq} = N(\nu) \cdot U(\nu, T)}$, (1) is the internal energy written $\boldsymbol{U(\nu, T) = \frac{E_\nu}{e^{\frac{E_\nu}{kT}} - 1}}$ **and** $\boldsymbol{N(\nu) = \frac{8\pi\nu^2}{c^3} V}$ is the number of states of the oscillators times the volume V of photonics gas $T_q \cdot c \cdot \pi \cdot r_B^2$; where V is the volume of photonic gas => we consider a slightly variation of h depend on frequency $\mathbf{E = \nu \cdot h(\nu);}$ (2) and we will demonstrate a more general differential equation valid for any frequency (3).

With ω = 2πν and $N(\nu) = \frac{8\pi V \nu^2}{c^3}$ And V is the quanta of photonic gas with cylindrical symmetry of the height of the cylinder is Tq·c, and with radius r_b and area $\pi \cdot r_b^2$ Thus, the volume (V) of photic gas has the value $Tq \cdot c \cdot \pi \cdot r_b^2 = \pi \cdot r_b^3$ => The energy per quanta Tq is: $\boldsymbol{E_{vq} = N(\nu) \cdot U(\nu, T);}$ For the unit energy per time quanta per angle unit, where U(ν, T) (or < E >) is the internal energy written $\boldsymbol{U(\nu, T) = \frac{E_\nu}{e^{\frac{E_\nu}{kT}} - 1}}$ **and** $\boldsymbol{N(\nu) = \frac{8\pi\nu^2}{c^3} V}$ is the number of states of the oscillators times the volume of photonics gas $T_q \cdot c \cdot \pi \cdot r_B^2$. Thus, for the quanta energy of elementary volume for a photon with velocity "c", period of oscillations t_0, and the sum of infinitesimal value t=1/ν for Tq (quanta => Tq = $1.765 \cdot 10^{-19}$ sec; $r_{Bohr} = c/T_q$) is:

$$E_\nu = \frac{1}{T_q^2} \cdot diff\left(\frac{T_q \cdot c \cdot r_B^2 \cdot 8 \cdot \pi^2 \cdot \nu^2}{c^3} \frac{E_\nu}{e^{\frac{E_\nu + E_\mu}{E_0}} - 1}, \nu\right) = diff\left(T_q \cdot 8 \cdot \pi^2 \cdot \nu^2 \frac{E_\nu}{e^{\frac{E_\nu + E_\mu}{E_0}} - 1}, \nu\right) \quad (3)$$

Where E_μ is the electronegativity of the minimum of photon energy equal to the energy of a muon neutrino E_μ = 0.020eV, and E_0 is the proportional reference energy at which the derivative of the Planck distribution is null. *We make the supposition that the energy of photons is proportional to the period of T_q times the derivative of the Planck body law with respect to ν.* The interval $\nu_{min} \div \nu_{max\ is}$ the lowest frequency of the photon energy at wavelength 60μm ÷ 3nm. All-optical integral paths from the derivative of the Planck body law occur from the Feynman principle of the Optical Lagrange Function. We have photons (λ=>3nm÷30μm). Thus, the total amount of energy quanta, for an interval of frequencies between (100nm-10μm), one should approximate Planck's formula ε = ~~h~~·ω. Planck empirically supposes that all quantum energies are equal by looking at experimental data from infrared to UV (1μm-200nm), with Tq=$1.765 \cdot 10^{-19}$ sec, so:

$$E_\nu = diff\left(T_q \cdot 8 \cdot \pi^2 \cdot \nu^2 \frac{E_\nu}{e^{\frac{E_\nu + E_\mu}{E_0}} - 1}, \nu\right) \quad (4)$$

Thus, the total amount of energy quanta, for an interval of frequencies between (100nm-10μm), one should approximate Planck's formula ε = ~~h~~·ω. Planck empirically supposes that all quantum energies are equal (the linear proportionality) by looking at experimental data from infrared to UV (10μm-100nm) page 9 paragraph #10 => "On the Law of the Energy Distribution; Max Planck January 7, 1901"
Einstein's original paper: https://einsteinpapers.press.princeton.edu/vol2-trans/100
For photons, we assume that the quantum energy is different from the Planck law E ~ h·ν, thus for the frequency of extended UV, visible light to infrared is usually 100nm - 10μm (see the linear part of the plot in PlanckBB1.mw). Likewise, we admit that the Planck distribution law of blackbody is valid (1), but quantum energy is slightly different from E ~ ~~h~~ω, depending on the frequency. Also, for a quantum of time, the infinitesimal value $E(\nu)_\nu$ should be (3).
10) The Galaxies in the Local Group that we know are approaching to Milky Way are: Andromeda 2.5 million LightYears away (in a collision course to the Milky Way in 4.5 billion years), The Triangulum and The Small Triangulum Galaxy approaching Andromeda's Large and Small Magellanic Cloud in collision with Milky Way in ~2 billion years, the Maffei 1, & Maffei 2 Galaxy (NGC 1428 & NGC 1425) are approaching to Earth…. The galaxies M90, M86, and M98 are approaching the Milky Way Galaxy (and probably Draco, Carina, Sculptor, Ursa Minor, Leo, Sagittarius, Pegasus, and Leo A also are in a collision

course thus we suppose that all the galaxies that are closer to 4 ÷ 5 million light years are attracted one to other and will emerge in a bigger galaxy).
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