Electron equation on 1 S orbital & Flux

The particle in the motion is one-time quant a microparticle and one-time quant a wave of probability and between it executes a quantum jump from the successive position in space, both equal to $1.765\cdot10^{-19}$ sec for 1 S orbital of the Hydrogen atom. Into a Time Quanta, there is a succession of quantum jumps effectively between successive positions in space. The probability wave instantly collapsed when interacting by measuring with an instrument and we observe the position of the momentum or other physical property constringe the microparticle to remain for a few Time Quants material particles with the property as mass, velocity, and other parameters. After the process of measuring and the constraints of being a particle, the electron after several Time Quants the alternate process of the wave of probability-particle is restored.
For the first orbit of the Bohr model, we will demonstrate that $T_{qe} = \sim1.765\cdot10^{-19}$ sec, Time Quanta = rb/c. 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 pilot wave probability that decreases very rapidly with –R gradient and has definition $p(x,t) = |\psi(x,t)|^2$ as in Bohm's Quantum Potential. If the speed depends on x coordinate V(x) according to the Flux conservation equation (1) of the probability density:

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

And the equation (2) of motion:

$$\frac{2\cdot m_e}{\hbar^2}\left(E+\frac{e^2}{r}\right)f(r,t) + \frac{R}{r}\frac{\partial^2\big(f(r,t)\big)}{\partial r^2} = \frac{1}{\alpha^2c^2}\frac{\partial^2 f(r,t)}{\partial t^2}$$

Where $R=3.566\cdot10^{22}$ m is a constant distance calculated so the equation (2) and the Schrodinger equation should be equivalent for a radius small around several Bohr radius. Thus f(r,t) is efective wave function with the relation with the classical wave function: $f(r,t) = r\cdot\psi(r,t)$

Thus $\psi(r,t)$ satisfied the equation (3):

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

Thus for separate variable function $f(r,t) = g(r)\cdot h1(t)$ we have:

$$\frac{2\cdot m_e}{\hbar^2}\left(E+\frac{e^2}{r}\right)g(r)\cdot h1(t) + \frac{R}{r^2}\frac{\partial^2\big(g(r)\cdot h1(t)\big)}{\partial r^2} = \frac{1}{\alpha^2c^2}\frac{\partial^2 g(r)\cdot h1(t)}{\partial t^2}$$

With initial value condition: g(R) = 0, D(g)(0) = R, f(rb) = 0; and the consistent condition of velocity:

$$V = h1(t)\cdot\frac{\partial g(r)}{\partial r}V + g(r)\cdot\frac{\partial h1(r)}{\partial t}$$

Thus, for r = 0 we have $V = h1(t)\cdot R\cdot V + g(0)\cdot\frac{\partial h1(r)}{\partial t}$ for V=a·c the solution is: $h1(t) = \frac{1}{R} + e^{-\frac{Ract}{f(0)}}\cdot \_C1$

An electron makes a complete rotation on the nucleus at 1 S orbital with radius 0.529A into $\sim1.52\cdot10^{-16}$ sec thus 860.8-time electron quanta $1.765\cdot10^{-19}$ 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 $\sim1.765\cdot10^{-19}$ 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 (4) (flux conservation equation) and (5) that decreases

abruptly with -R derivate from the initial value $P(r,t_0)$ at t_0 to a smaller value continuously, as in the (plot 1) below, is propagated with velocity V. After the electron is in a position given by 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 that gives inertial mass matrices reparation in space.
The equation of Time Quanta is provided by a system of the Flux conservation equation (Bohm's Quantum Potential) of the probability density equation (4):

$$\frac{\partial P(r,t)}{\partial t} + \frac{\partial (P(r,t)\cdot V)}{\partial r} = 0$$

System with equation (5):

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

With initial value condition P(R,0) = 0 and, D[1](P)(0, 0) = - R;
Thus, the solution is (6) equation:

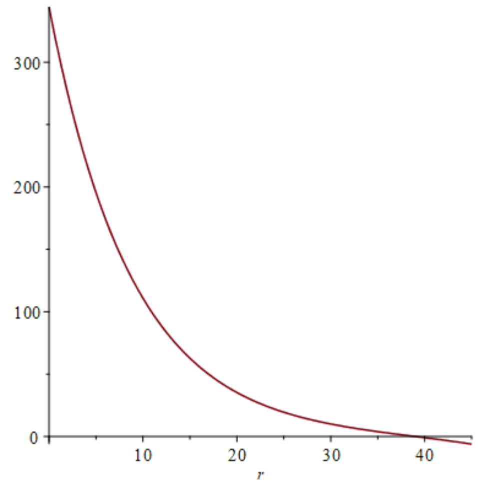
$$P_e(r,t) = \frac{\sqrt{2}\cdot R^{3/2}\cdot\left(e^{\frac{(V\cdot t+R-r)\cdot\sqrt{2}}{\sqrt{R}}} - 1\right)\cdot e^{-\frac{\sqrt{2}\cdot(V\cdot t-r)}{2\cdot\sqrt{R}}}}{e^{\sqrt{2\cdot R}+1}}$$

And the constant is determined from the normalization condition at t_0=0 is:

$$\int_0^R P(r,t_0)dr = \int_0^R |f(r,t_0)^2| dV = \_C_1^2 \int_0^\pi sin\theta\cdot d\theta\cdot\int_0^{2\pi} dy \int_0^R \frac{r^2\psi(r,t_0)^2}{r^2} dr = \_C_1^2\cdot 4\pi\int_0^R \psi(r,t_0)^2 dr \quad (7)$$

The elementary volume at time t_0 =0 so the condition is: $\_C_1^2\cdot 4\pi\int_0^R \psi(r,0)^2 dr = 1$. But the stationary state is for constant t and therefore t_0=0 thus $\psi(r)$ is the equation with t=0 and we simplify the problem by assuming normed constant $\_C_1^2 = 1$.
We substitute for the equation of electron with the velocity = c/137; (V=a·c=c/137); m = $9.109\cdot10^{-31}$; h=(6.6256/(2·Pi)) $\cdot10^{-34}$; ec = $1.602\cdot10^{-19}$; c = 299792458; rb = $5.292410932\cdot10^{-11}$; [SI units]
R= $3.567\cdot10^{22}$; a = 1/137; E = $2.179\cdot10^{-18}$;

A plot of equation (6) at t=0 for R=39; V=1 is as below: (plot 1):



As you can see the Distribution Probability is maximum at the current position in space & time and decrease to radius R where is null. Electron Time Quanta is: Tce= rb/c where ρ is "natural units" of rb thus
Tce = $1.765\cdot10^{-19}$ s Hence a more general solution is in the file ElectronFluxT.mw and the interpretation of the result. http://michaelvio.orgfree.com/ElectronFlux1s.pdf

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