Ether Particles and Electric Charge of Electron

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Abstract : The electron makes its electric charge by ether particles where these ether particles have circulation Motion around the electron When the electron is found in ether medium . Electric charge of electron decreases because Value of moving mass of ether particles around the electron decreases in the direction of electron motion when the Electron moves through ether medium . Ether medium represents moving Frame of reference for electric charge of Electron because velocity of ether particles equal to light speed .

1- Introduction :

[Electric charge of electron decreases when the electron moves through ether medium] [1] . [Ether medium is Material medium] [2] [3] [4] [5] ; therefore ether medium consists of material particles " ether particles " .

That means , ether particles influence on electric charge of electron and cause decreasing electric charge of electron When the electron moves through ether medium ; therefore electric charge of electron consists of material particles.

[The electron has spin , the electron spin is defined as the spinning of the electron around its axis] [6] [7] [8] [9] .

And [the electron has spherical shape] [10] [11] .

That means , the electron has rotation motion around its axis and influence on ether particles when it is found in ether medium ,therefore ether particles move around the electron that means ,ether particles have circulation motion around the electron . the goals are a- explanation of creating electric charge of electron when it is found in ether medium . b- explanation of decreasing electric charge of electron when the electron moves through ether medium .

2- Electric charge of electron consists of material particles . Ether particles are material particles and have circulation Motion around the electron when the electron is found in ether medium . that means , electric charge of electron consists of ether particles .

Let, a- Ether particles around the electron create electric charge of electron when the electron is found in ether medium.

b- Ether particles around the electron limit value of electric charge of electron when the electron moves through ether medium.

3- Discussion :

Number of ether particles have circulation motion around the electron and have mass equal to " m_o" when the electron is at rest in ether medium as fig (1) .

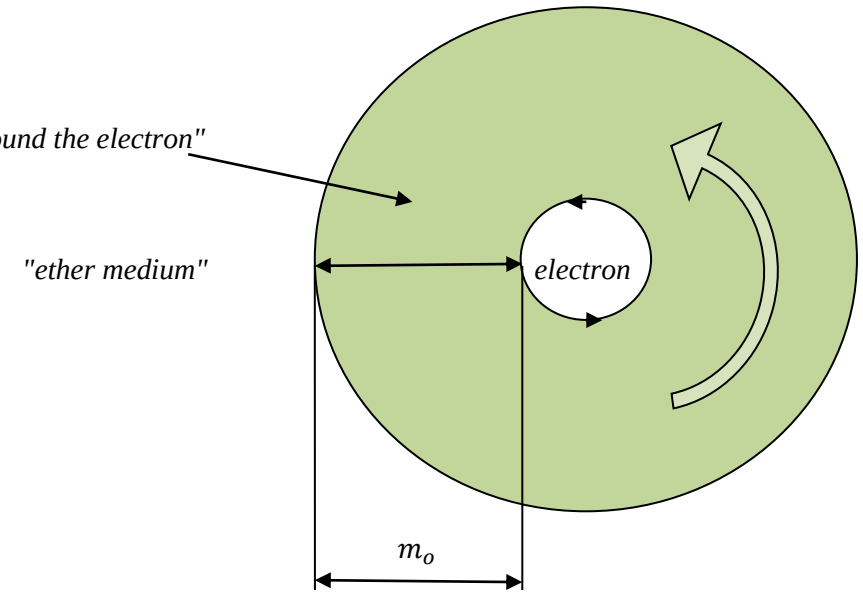

fig (1)

The electron cannot make moving mass of ether particles around it greater than its mass ; therefore

$m_o = m_e \longrightarrow$ (1) where : "m_o" represents value of moving mass of ether particles around the electron when The electron is at rest in ether medium (kg) and " m_e" is electron mass(kg) .

Value of moving mass " m_o" decreases in the direction of electron motion when the electron moves through ether Medium because the particles of mass " m_o" impact with ether medium whereas ether medium consists of material particles ,"ether particles " as fig (2) ; therefore $m_o = m_d + m \longrightarrow$ (2) where :

"m_o" represents value of moving mass of ether particles around the electron when the electron is at rest in ether Medium (kg) .

" m_d" represents value of moving mass of ether particles around the electron when the electron moves through ether Medium (kg) .

Or " m_d" represents value of existing mass of ether particles from the mass " m_o" in the direction of electron motion when the electron moves through ether medium .

" m " represents value of missing mass of ether particles from the mass " m_o" in the direction of electron motion when the electron moves through ether medium (kg) .

" existing mass of ether particles in the direction of electron motion"

" missing mass of ether particles in the direction of electron motion "

v

"electron velocity through ether " medium

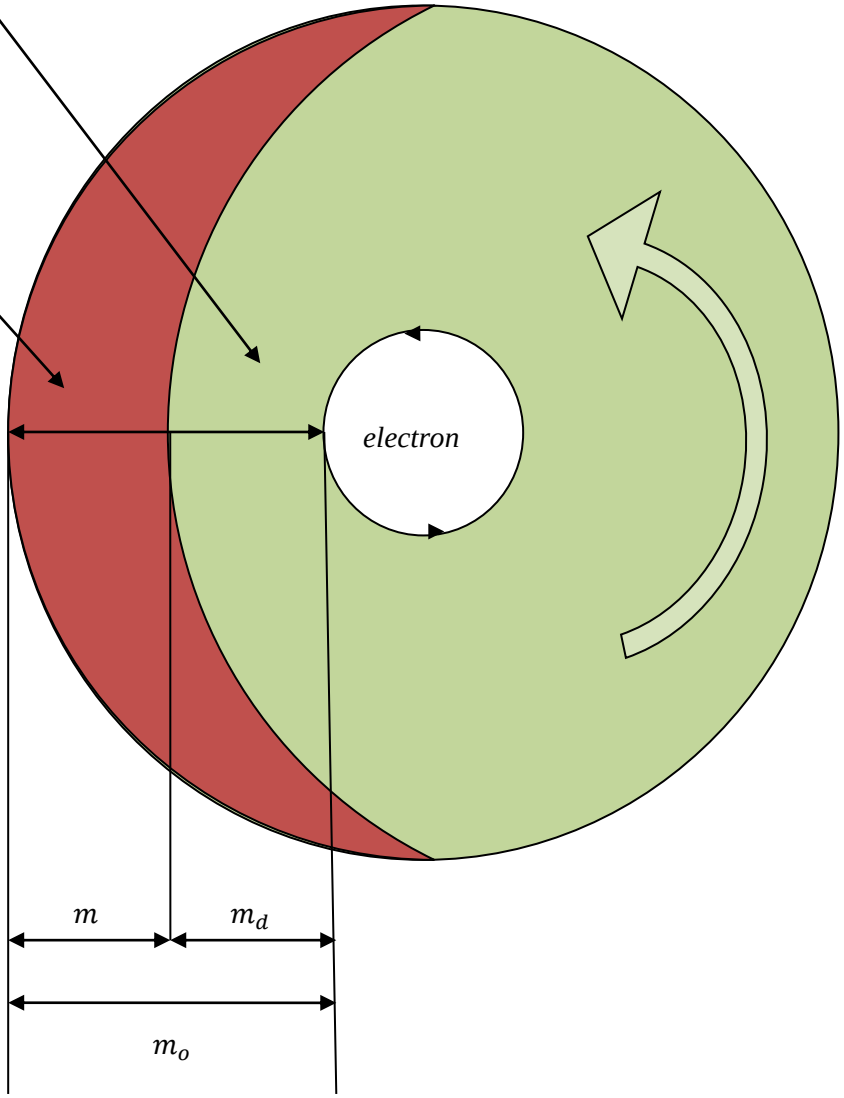

fig (2)

Multiply equation (2) by " u^2 " to find kinetic energy of ether particles around the electron . then

$m_o\, u^2 = m_d\, u^2 + m\, u^2$ ⟶ (3) where : " u " is velocity of ether particles .

At instant time , kinetic energy of electron equal to kinetic energy of missing mass of ether particles " m" in the direction of electron motion . then $m_e\, v_e^2 = m\, u^2$ ⟶ (4) where : " m_e" is electron mass , " v_e" is electron Velocity , " m " represents value of missing mass of ether particles from the mass " m_o" in the direction of electron Motion when the electron moves through ether medium . and " u " is velocity of ether particles .

Substitute equation (1) in equation (4) then , $m_o\, v_e^2 = m\, u^2$ ⟶ (5) and substitute equation (5) in equation (3)

$m_o\, u^2 = m_d\, u^2 + m_o\, v_e^2$ ⟶ $(\, m_d\, u^2 = m_o u^2 - m_o\, v_e^2\,) \times \frac{1}{u^2}$ ⟶ $m_d = m_o - m_o\, \frac{v_e^2}{u^2}$ ⟶

$(m_d = m_o(1 - \frac{v_e^2}{u^2})) \times \frac{1}{u} \longrightarrow \frac{m_d}{u} = \frac{m_o}{u}(1 - \frac{v_e^2}{u^2}) \times f$ where " f " is factor and represents an Ability of ether particles to transmit kinetic energy among them . $\frac{f \times m_d}{u} = \frac{f \times m_o}{u}(1 - \frac{v_e^2}{u^2})$ and square Root for both side $(\sqrt{\frac{f \times m_d}{u}} = \sqrt{\frac{f \times m_o}{u}} \sqrt{(1 - \frac{v_e^2}{u^2})}) \times \pi$ because ether particles surround the electron.

$\pi \sqrt{\frac{f \times m_d}{u}} = \pi \sqrt{\frac{f \times m_o}{u}} \sqrt{(1 - \frac{v_e^2}{u^2})} \longrightarrow$ (6) . [Electric charge of electron decreases in the direction of electron motion by equation , $q = q_o \sqrt{\left(1 - \frac{v^2}{c^2}\right)} \longrightarrow$ (7) where : "q" is electric charge of electron when it is moving through ether medium (c) , "q_o" is electric charge of electron when it is at rest in ether medium and equal $q_o = 1.602 \times 10^{-19} C \longrightarrow$ (9) , " v " is velocity of electron $\frac{m}{sec}$, and " c" is Light speed $\frac{m}{sec}$] [1] . then $q = q_o \sqrt{\left(1 - \frac{v^2}{c^2}\right)} \longrightarrow$ (7) and $q_o = 1.602 \times 10^{-19} C \longrightarrow$ (8) . compared equation (6) with equation (7) , $u^2 = c^2 \longrightarrow u = c \longrightarrow$ (9) that means , velocity of ether particles " u" equal to light speed " c " , $q_o = \pi \sqrt{\frac{f \times m_o}{u}} \longrightarrow$ (10) , $q = \pi \sqrt{\frac{f \times m_d}{u}} \longrightarrow$ (11) . substitute equation (9) in equations (6) , (10) and (11) . then, $\pi \sqrt{\frac{f \times m_d}{c}} = \pi \sqrt{\frac{f \times m_o}{c}} \sqrt{(1 - \frac{v_e^2}{c^2})} \longrightarrow$ (12)

$q_o = \pi \sqrt{\frac{f \times m_o}{c}} \longrightarrow$ (13) , $q = \pi \sqrt{\frac{f \times m_d}{c}} \longrightarrow$ (14) .

From equation (13) $f = \frac{c}{m_o}(\frac{q_o}{\pi})^2$ where : [π = 3.14 , c = $2.998 \times 10^8 \frac{m}{sec}$] [7][12] , from equation (8) $q_o = 1.602 \times 10^{-19} C$, from equation (1) $m_o = m_e$ and [$m_e = 9.1 \times 10^{-31} kg$] [1] . then

$$f = \frac{2.998 \times 10^8}{9.1 \times 10^{-31}} \left(\frac{1.602 \times 10^{-19}}{3.14}\right)^2 = 0.857 \frac{m.c^2}{\sec . kg} \longrightarrow (15)$$

Let , $M = \pi \sqrt{\frac{f}{c}} = 3.14 \sqrt{\frac{0.857}{2.998 \times 10^8}} = 1.678 \times 10^{-4} \frac{c}{\sqrt{kg}} \longrightarrow$ (16) where " M " is constant .

Substitute equation (16) in equations (12) , (13) and (14) . $M \sqrt{m_d} = M \sqrt{m_o} \sqrt{(1 - \frac{v_e^2}{c^2})} \longrightarrow$(17) , $q_o = M \sqrt{m_o} \longrightarrow$(18) , $q = M \sqrt{m_d} \longrightarrow$ (19) . from equation (17)

$$\sqrt{m_d} = \sqrt{m_o} \sqrt{(1 - \frac{v_e^2}{c^2})} \longrightarrow (20)$$

From equations (17) , (18) and (20) , ether particles create electric charge of electron when the electron is found in Ether medium .

From equations (17) , (19) and (20) , value of electric charge of electron depends on value of existing mass of ether particles" m_d"from the mass " m_o" in the direction of electron motion when the electron moves through ether medium ; therefore electric charge of electron decreases because value of moving mass of ether particles " m_o" decreases in the direction of electron motion when the electron moves through ether medium.

from equations (7) and (17) , light speed " c " represents reference for electric charge of electron . from equation (9) , $u = c$, velocity of ether particles " u " equal to light speed " c " . that means , ether medium represents moving frame of reference for electric charge of electron .

4- Resultant :

1- Ether particles create electric charge of electron because ether particles have circulation motion around the electron When the electron is found in ether medium by equation (18) $q_o = M\sqrt{m_o}$.

2- Value of electric charge of electron depends on value of existing mass of ether particles " m_d" from the mass " m_o" in the direction of electron motion when the electron moves through ether medium by equation (19) ,

$q = M\sqrt{m_d}$

3- Electric charge of electron decreases because value of moving mass of ether particles around the Electron " m_o" decreases in the direction of electron motion when the electron moves through ether medium by equations

$q = q_o\sqrt{\left(1 - \frac{v^2}{c^2}\right)}$ ⟶ (7) and $M\sqrt{m_d} = M\sqrt{m_o}\sqrt{\left(1 - \frac{v_e^2}{c^2}\right)}$ ⟶ (17)

4- The mass " m_d" determines by equation (20) $\sqrt{m_d} = \sqrt{m_o}\sqrt{\left(1 - \frac{v_e^2}{c^2}\right)}$

5- The mass " m " determines by equation (2) $m_o = m_d + m$

6- Velocity of ether particles " u " equal to light speed "c" by equation (9) $u = c$

7- Ether medium represents moving frame of reference for electric charge of electron.

For each equations ,

"q" is electric charge of electron when the electron is moving through ether medium (C) .

"q_o" is electric charge of electron when it is at rest in ether medium and equal $q_o = 1.602 \times 10^{-19} C$ ⟶ (8)

"m_d" represents value of moving mass of ether particles around the electron when the electron moves through ether Medium or " m_d" represents value of existing mass of ether particles from the mass " m_o" in the direction of electron motion when the electron moves through ether medium (kg) .

" m " represents value of missing mass of ether particles from the mass " m_o" in the direction of electron motion when the electron moves through ether medium (kg) .

"m_o" represents value of moving mass of ether particles around the electron when the electron is at rest in ether Medium and equal to electron mass $m_e = 9.1 \times 10^{-31}\ kg$, "c" is Light speed $\frac{m}{sec}$, "π" = 3.14

"f" is factor and represents an ability of ether particles to transmit kinetic energy among them and equal to

$f = 0.857 \quad \frac{m.c^2}{\sec.kg} \longrightarrow$ (15) , "v"and "v_e" are velocity of electron $\frac{m}{sec}$. "M" is constant and

Equal , $M = \pi \sqrt{\frac{f}{c}} = 1.678 \times 10^{-4} \ \frac{c}{\sqrt{kg}}$

5- Conclusion:

Electric charge of electron decreases when the electron moves through ether medium because ether medium and Electric charge of electron consist of material particles" ether particles ". Ether medium represents moving frame of Reference for electric charge of electron because velocity of ether particles equal to light speed .

6- Reference :

[1] Marwan Taha Kidair , About Ether , Lorentz contraction and Electric Charge , The general science journal , February 26, 2016, File 6389 , gs**journal**.net/

[2] Sanjay Moreshwar Wach and Dilip A Basaheb Deshpande , Essentials of physics , Volume II , 2013 , P. 215 – 216

[3] Ray Skinner , Relativity for Scientists and Engineers , 2014 , P. 18 - 26

[4] Dipak Chandra Ghosh , Nripesh Chandra Ghosh , Prabir Kumar Haldar , Engineering physics , 2008 , P. 220

[5] Nikhllendu Bandyopadhyay , D.sc (cal) , Theory of Special Relativity , 2000 , P. 3 - 4

[6] Charles E.Burkhardt and Jacob J.Leventhal , Topic in Atomic Physics USA ,2006 , P. 35

[7] Serway and Jewett , principles of physics , Acalculus – Based Text , 4th edition , 2006 , P. 994 - 997

[8] J.Michael Hollas , Modern spectroscopy , 4th edition , 2004 , P. 17 - 19

[9] R.Shankar , Principles of Quantum Mechanics , 2nd edition 1994 , P. 373 - 377

[10] J. J. Hudson, D. M. Kara, I. J. Smallman, B. E. Sauer, M. R. Tarbutt, E. A. Hinds. **Improved measurement of the shape of the electron**. *Nature*, 2011; 473 (7348): 493 DOI: 10.1038/nature10104 Imperial College London , www.sciencedaily.com/releases/.../110525131707.htm

[11] 1. B C Regan *et al, Phys. Rev. Lett.*, 2002, **88**, 071805 (DOI: 10.1103/PhysRevLett.88.071805) , 2. J J Hudson *et al, Nature*, 2011, **473**, 493 (DOI: 10.1038/nature10104) , www.rsc.org/chemistryworld/News/2011/.../25051105.a.

[12] Douglas C.Giaoli , Physics : Principles With Application , 2005