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Magnetic Dipole Moment of the Electron III

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See Unified Absolute Relativity Theory at:

www.wbabin.net/saraiva/saraiva105.pdf
www.wbabin.net/saraiva/saraiva223.pdf
www.wbabin.net/saraiva/saraiva282.pdf

Abstract – Mankind is stupid.

The magnetic dipole moment of the electron is wrong. The used value is only a momentum. Another proof:

Momentum of the electron:

$$p = q.A_e = I.Area = 9.27485 \times 10^{-24} \qquad \text{(SI units)}$$

Magnetic potential of the electron:

$$A_e = \frac{c.x_e}{4\pi}$$

p – momentum; q – electric charge; I – electric current; c – light speed;
x_e - Compton wavelength of the electron.

$$\Leftrightarrow \quad q\frac{cx_e}{4\pi} = I.Area = qf_e\pi R^2 \ ; \qquad R = \frac{x_e}{2\pi}$$

f_e - Compton frequency of the electron.

$$\Leftrightarrow \qquad q\frac{cx_e}{4\pi} = qf_e\frac{x_e^{\,2}}{4\pi} \qquad \Leftrightarrow$$

$$\Leftrightarrow \qquad x_e = \frac{c}{f_e} \quad \text{-- Compton relation}$$

So, an electric current times an area is a momentum, not a magnetic dipole moment.
Correct value of the electron magnetic dipole moment:

$$\mu_e = q_m x_e = \frac{h}{2q} x_e = 5.0165 \times 10^{-27}$$

q_m - magnetic charge of the electron (Weber); h – Planck constant.

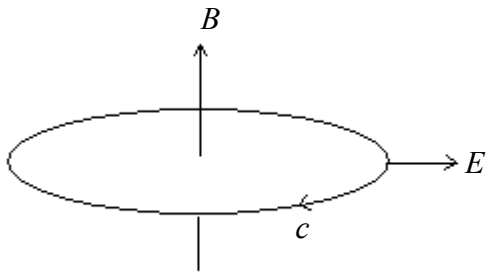
Two important relations:

Proton MDM -- $\mu_P = 3\mu_e$

Neutron MDM -- $\mu_N = 2\mu_e$

Electron structure and spin

The spin of the electron is totally classical.
A particle is a wave rotating on its own magnetic or electric fields.



For the electron what rotates is its electric field.

Spin:

$$S_e = \frac{h}{4\pi} = \frac{m_e}{2} Rv = \frac{m_e}{2} \frac{x_e}{2\pi} c$$

$$S_e = I_e \omega_e \quad \text{and} \quad \omega_e = 2\pi f_e \quad ; \quad R = \frac{x_e}{2\pi}$$

Electron moment of inertia:

$$I_e = \frac{m_e}{2} R^2$$

So, the mass of the electron is in a solid disc.

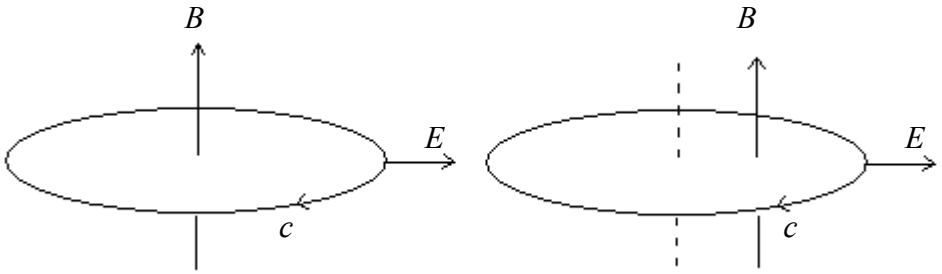
$$S_e = \frac{m_e}{2} R^2 2\pi . f_e = \frac{h}{4\pi}$$

The problem of the orientation of the electron when rotated that must be of 720º is because the electron in hydrogen atom has a double orbit – the known factor of about 2.

How energy is stored in a particle

An approximation:

Rest electron Moving electron



The particles are a double referential.

Total force for a rest electron:

$$F = q.E + \frac{2\alpha .q_m B}{\mu_0} = 2qE$$

Energy:

$$E_e = FR = 2qER \;; \qquad E = \frac{q}{\left(\frac{4}{3}\right)\pi R^3} \;; \qquad R = \frac{x_e}{2\pi}$$

$$\Leftrightarrow \qquad E_e = \frac{8\pi q^2}{\left(\frac{4}{3}\right)x_e^{\,2}} \approx 0.511MeV$$

The 4/3 problem of the electron energy is just an error.

The Michelson-Morley experiment

We have a car moving at the speed of 50km/h.
We measure the wind speed inside the car and we get a zero speed.
So, we prove that the air doesn't exist.
How can we measure the aether speed inside the earth atmosphere?
Like says quantum mechanics the aether does exist and has electromagnetic properties.

Electric dipole moment of the electron

The mass of a particle is its electric dipole moment.

Coulomb.meter = kilogram

EDM = m_e = 9.11×10^{-31} kg or Cm

Dirac electric dipole moment of the electron:

$$EDM_{Dirac} = \frac{qh}{4\pi .m_e c} = 3.1 \times 10^{-32} Cm$$

$$EDM_{Dirac} \times 4\pi \frac{m_e}{qx_e} = m_e$$