

The Richness and Quality of the Electron Positron Dipole

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Abstract. It is assumed that the rotating electron positron dipole is the primary physical unit of electromagnetism. The rotating electron positron dipole consists of an electron in a mutual central force Keplerian orbit with a positron. The axis of rotation of this rotating dipole is perpendicular to a line joining the electron to the positron. Aether flows out of the positron, crosses over, and sinks down into the electron. This results in a swirling aether vortex with the electron and the positron acting in the capacity of rolling idle wheels. The richness and quality of this prototype unit will now be discussed in terms of the manifestation of ten very important and distinctive physical characteristics.

(1) A Dielectric

The rotating electron positron dipole, by its very nature is the prototype dielectric. It contains a single positive charge and a single negative charge. It possesses self restoring transverse elasticity, and it can be linearly polarized when subjected to an external electrostatic field.

(2) A Bar Magnet

The rotating electron positron dipole, with its intrinsic magnetic spin moment, is the prototype bar magnet. The magnetic field surrounding a rotating electron positron dipole will arise due to a centrifugal repulsion acting in the equatorial plane, and a Coulomb force acting in the axial plane.

(3) A Vortex Cell

In the rotating electron positron dipole, the electric field lines will cross over directly between the electron and the positron. When the dipole rotates, the aethereal medium that is enclosed within it, between the electron and positron, will also rotate. This rotating aether/space inside the dipole can instigate the gyroscopic/Lorentz force $\mathbf{F} = q\mathbf{v}\times\mathbf{B}$ to act upon any charged particle that should happen to pass through. The vector quantity \mathbf{B} is a measure of the vorticity of the aether enclosed within the dipoles. The

fundamental aethereal gyroscopic force $\mathbf{F} = q\mathbf{v}\times\mathbf{B}$ is one of the causes of electromagnetic induction, and it also causes the force that acts on a current carrying wire in a magnetic field. See ‘The Double Helix Theory of the Magnetic Field’,

<http://www.wbabin.net/science/tombe.pdf>

(4) A Gyroscope

The rotating electron positron dipole is essentially a miniature soft gyroscope. A sea of such closely packed miniature gyroscopes will automatically align themselves solenoidally in their axial plane. This alignment will be due to the gyroscopic force $\mathbf{F} = q\mathbf{v}\times\mathbf{B}$ which arises when the electrons and positrons move in the rotating aether created by their neighbours. See ‘Gravitational Induction and the Gyroscopic Force’,

<http://www.wbabin.net/science/tombe5.pdf>

(5) A Flywheel (An Electromagnetic Inductor)

The rotating electron positron dipole is a miniature flywheel that can store rotational kinetic energy. An electric current in a wire acts like an axle to the electron positron flywheels that exist in the space surrounding it. The current aligns the flywheels by the gyroscopic force $\mathbf{F} = q\mathbf{v}\times\mathbf{B}$, and then it grips them with the fundamental angular force $\partial\mathbf{A}/\partial t$. The fundamental force $\partial\mathbf{A}/\partial t$ is one of the causes of electromagnetic induction. The vector \mathbf{A} represents the fluid field velocity of the aether. See ‘The Coriolis Force in Maxwell’s Equations’,

<http://www.wbabin.net/science/tombe4.pdf>

and also ‘Gravitational Induction and the Gyroscopic Force’. As such, it follows that $\text{curl } \mathbf{A} = \mathbf{B}$.

(6) A Capacitor (A Mechanical Spring)

The rotating electron positron dipole is the prototype capacitor and mechanical spring. It can be linearly stretched to store mechanical (electrical) energy. Spring constant and transverse elasticity are inversely related to electric permittivity.

(7) An AC Current

The rotating electron positron dipole is an alternating electric current when the motion is resolved in any planar direction. Under the action of the Coulomb force, this electric current becomes a displacement current, whereas under the action of the angular $\partial\mathbf{A}/\partial t$ force, this current becomes a ‘Changing Current’.

(8) An Antenna

The rotating electron positron dipole is the prototype electromagnetic wave transmission and reception dipole antenna. It swirls excess rotational energy laterally to its neighbours via the fundamental angular force $\partial\mathbf{A}/\partial t$.

(9) An Energy Domain

The rotating electron positron dipole can possess energy in various forms. It can possess potential and kinetic energy as a result of being linearly stretched. It can possess rotational kinetic energy, and it can possess translational kinetic energy. This makes it a perfect candidate to account for all forms of energy transfer associated with an electric current in a wire.

Translational motion of the dipole as a whole inside a wire could account for the kinetic energy that we measure as electric current. We also know from high tension transmission lines that there is another mode of electrical energy transfer that differs in nature from translational particle motion. This other mode is associated with potential energy and it almost certainly propagates as either an electromagnetic wave or an electropolarization wave, or both. Rotating electron positron dipoles within a conducting wire would act as the perfect propagation medium for either of these kinds of wave.

(10) A Graviton

Aepinus (1724-1802) suggested that the attractive forces between two uncharged bodies might be very slightly greater than the repulsive forces and that this difference might be the cause of gravitation.

If the electron is ever so slightly more negatively charged than the positron is positively charged, then there will be a net inflow of the aether into the electron positron dipole as a whole. This net inflow will manifest itself as gravitational charge. Magnetospheric charts clearly indicate that the sea of electron positron dipoles is gravitationally bound to the Earth, hence confirming that electron positron dipoles are indeed gravitationally charged. See 'Gravity is Negative Electricity'.

<http://www.wbabin.net/science/tombe6.pdf>

Conclusion

The rotating electron positron dipole with its associated transverse elasticity is responsible for electric permittivity and capacitance. The density of a sea of such dipoles gives rise to magnetic permeability and contributes towards inductance. These two parameters, permittivity and permeability, contribute towards the speed of light.