The Richness and Quality of the Electron-Positron Dipole

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Abstract. The rotating electron-positron dipole is the primary physical unit of electromagnetism. It consists of an electron in a mutual central force 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 electric 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 an inverse square law Coulomb force of attraction 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/convective aspect of the Lorentz force, $\mathbf{F} = q\mathbf{v}X\mathbf{H}$, to act upon any charged particle that should happen to pass through. The vector quantity **H** is a measure of the vorticity of the aether enclosed within a dipole. As a Coriolis force, $\mathbf{F} = q\mathbf{v}X\mathbf{H}$ is one of the causes of electromagnetic induction, and as a centrifugal force it is one of the forces 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/Coriolis force $\mathbf{F} = q\mathbf{v}X\mathbf{H}$ which arises when the electrons and positrons move in the rotating aether created by their neighbours. See 'Gravitation 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 Coriolis aspect of the **F** = q**v**X**H** force, and then it grips them with the angular force $\partial\mathbf{A}/\partial t$. The angular force $\partial\mathbf{A}/\partial t$ is one of two forces involved in electromagnetic induction and it is almost certainly caused by fine-grain centrifugal force and Coriolis force. The vector **A** represents the aether field momentum. See 'The Link between Electric Current and Magnetic Field',

http://www.wbabin.net/science/tombe7.pdf

and also 'The Coriolis Force in Maxwell's Equations',

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

(6) A Capacitor (A Mechanical Spring)

The rotating electron-positron dipole is both the prototype capacitor and the prototype 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.

(8) An Antenna

The rotating electron-positron dipole is the prototype transmission and reception dipole antenna for electromagnetic waves. It swirls excess rotational energy laterally to its neighbours when it angularly accelerates.

(9) An Energy Domain

The rotating electron-positron dipole can store energy in various forms. It can store potential and kinetic energy as a result of being linearly stretched. It can store rotational kinetic energy, and it can possess translational kinetic energy.

(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 Reversal and Atomic Bonding’.

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