Bernoulli's Principle in the Antenna

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Abstract. Electric current consists of a flow of pressurized aether. In an antenna, the associated aether pressure gives rise to static electric charge, and the associated flow of aether gives rise to a magnetic field. The charge is associated with potential energy and the current flow is associated with kinetic energy. It will now be discussed how the phase difference between the two associated surrounding fields is a manifestation of Bernoulli's Principle.

The Electrostatic Field (The Near Field)

I. When an alternating voltage is applied to an antenna, an alternating current will flow in it. Maximum aether pressure will occur at the point when the current is reversing its direction. We will therefore have a 'velocity to pressure' relationship as per Bernoulli's Principle. The pressurized aether in the antenna will give rise to electric charge which will leak perpendicularly out of the side of the wire. This will cause linear polarization of the surrounding electron-positron sea. The polarization will create a state of electrification which is sometimes referred to as 'electric tension' although it would be more accurately referred to as 'electric pressure'. This pressure can arc and cause bolts of lightning. It is described mathematically in terms of an electric field. This electric field will have a drop off rate which should be related to the centrifugal pressure that occurs amongst the electrons and positrons that comprise the field lines. Centrifugal force is an inverse cube law force and so we would expect this electric field to drop off at approximately that rate. The action-at-a-distance Gauss's law and the equation of continuity will be involved on the picoscopic scale between the electrons and positrons, and

as such we might expect the propagation of effects to occur at an infinite speed.

The Electromagnetic Field (The Far Field)

II. When the current flow is at its maximum, the surrounding magnetic field will be at its maximum, but the state of electrification will be at its minimum.

The electric field that causes the magnetic field will be tangential to the vortices in the surrounding space and it will always be exactly in phase with the magnetic field, just as the tangential force on a fly-wheel will always be exactly in phase with the angular speed that it causes. This electric field, $\partial \mathbf{A}/\partial t$, will have zero divergence and it should not be confused with the electric field mentioned in section **I**. These two electric fields will be orthogonal to each other geometrically and they will also be out of phase with each other by ninety degrees.

The electromagnetic field will propagate at the speed of light.

Bernoulli's Principle and Stellar Aberration

III. When electromagnetic radiation crosses a moving boundary between two portions of the electron-positron sea, a Galilean addition of velocities will be observed as regards the direction. This effect is known as stellar aberration. However, the speed relative to the Earth's magnetosphere will remain as it had been relative to the solar magnetosphere. In order to conserve energy, the aether pressure will change as per Bernoulli's Principle. Since mass is a measure of the amount of aether, changes in the aether pressure of the radiation will change the mass and the energy. The Doppler effect will also cause the frequency to change. Although the energy and the frequency will change proportionately to each other, the original relationship between energy and frequency is something which is caused by the emission mechanism.