Abstract. Gravity, cathode rays, and bolts of lightning share one important feature in common. They are all manifestations of aether flow. Gravity is a tension associated with aether that is flowing into a sink, and since it acts equally on all particles within a body, the acceleration due to gravity does not depend on the inertial mass of the body that is undergoing the acceleration. Cathode rays on the other hand can heat a body, charge a body, and cause a body to accelerate. In the latter case, the inertial mass of the body is a relevant factor in deciding the acceleration that will be induced in that body by the incident cathode rays. It will be concluded that cathode rays are a pressurized flow of aether and that inertial mass is a capacity to absorb aether pressure.

Aether Absorption

I. The analogy between the mechanical spring and the electric circuit is well known to physics students. Mass m is equated with inductance L, spring constant k is equated with 1/C where C is capacitance, and air resistance R is equated with electrical resistance R. In actual fact, inertial mass shares characteristics with all three of the electrical parameters L, C, and R. All of these concepts involve the absorption of aether. When a massive body is restrained at rest in an irrotational force field, it will absorb aether and become linearly polarized. The amount of energy
absorbed will be a measure of the capacitance of the body and this will be proportional to its inertial mass.

A massive body which is free to move in an irrotational force field will absorb aether and this absorption will diminish the rate at which energy will convert into large scale motion of the body as a whole. The inertial mass is therefore a measure of impedance, analogous to inductive impedance in electromagnetism. This fact forms the basis of Newton’s second law of motion and Mach’s definition of inertial mass.

Electrical resistance \( R \) is dependent on the length of a wire. This means that electrical resistance must involve the absorption of the aether flow that constitutes the electric current.

**Electric Charge**

II. Negative electric charge is a tension associated with aether that is flowing into a sink such as an electron, whereas positive electric charge is a pressure associated with aether that is flowing out of a source such as a positron. Resinous charge and vitreous charge are associated with linear polarization. They involve the aether pressure that is stored in the polarized electron-positron dipoles that surround a resinously charged or a vitreously charged body. In the case of resinous and vitreous charge, the aether pressure is rooted in fine-grain centrifugal force. Centrifugal force is a radial expansion which occurs when vorticity causes aether sinks to become congested. See ‘The Cause of Centrifugal Force’. [1]

A positive electric current is a pressurized flow of aether which can be sourced either from a battery or from electromagnetic induction. In the former case the source is almost certainly positive charge, whereas in the latter case, the source is a fine-grain rotational pressure that is to all intents and purposes equivalent in its effect to a positive source. [2]

**Attraction and Repulsion**

III. A negative charge will be attracted to an aether source if the negative charge is strong enough. The criteria for deciding this would be that the aether is flowing into the sink at a faster rate than it is flowing out of the source. Hence in the case of positive electric current which is a
pressurized flow of aether, the direction of flow of negatively charged particles in the stream will depend on how negative they are. The stronger negatively charged particles will flow towards the source whereas the lesser negatively charged particles will be pushed away from the source. Positively charged particles will also be pushed away from the source. Hence, electron-positron dipoles which are mildly negatively charged may flow with the aether. On the other hand, when the electron-positron dipoles are not free to flow, as when an electric circuit is broken, the linear polarization of the dipoles will result in the individual electrons which are strongly negatively charged, being pulled towards the aether source against the flow, and the individual positrons being pushed in the opposite direction with the flow.

In a gravitational field which is a tension/pull force, the electron-positron dipoles in the electric sea are prevented from flowing into the Earth with the aether. This means that the dipoles will be linearly polarized. It is generally accepted that an electric field is stronger than a gravitational field, however, the situation is actually much more subtle than that. The negative electric field surrounding a resinously charged body arises from the exact same mechanism as gravity. The only difference is that in the case of resinous charge, the inflow rate increases such as to invoke a strong centrifugal reaction force within the polarized electron-positron dipoles.

### Gravity and Cathode Rays

**IV.** Gravity is a negative electric current. It is a tension which permeates matter and acts equally on all parts of a body. Galileo demonstrated this fact at Pisa.

Cathode rays on the other hand are a positive electric current. They are a pressurized flow of aether. When cathode rays strike a body, aether pressure is absorbed. The body can then become vitreously charged, heated, and it can even be linearly accelerated. In the late 19th century, Sir William Crooks demonstrated that cathode rays can make a paddle wheel roll up a hill against gravity in a vacuum tube. But this only occurs when the paddle wheel is reasonably light. Inertial mass, being a capacitance to absorb aether, will determine how much of the aether is absorbed and how much of the cathode ray force is left to induce linear acceleration.
The Maltese Cross

V. When a metal Maltese cross is placed in the path of a cathode beam in a vacuum tube, a perfect shadow is cast. Unlike gravity, cathode rays don’t always permeate through matter. They heat an object on one side only. This suggests that the linear polarization that is caused by the cathode rays at the surface, blocks the flow of the incident cathode rays.

The subtle difference between gravity and cathode rays is that gravity, being an all pervading tension and pull force, only begins to linearly polarize a material object when that object is prevented from accelerating on the large scale. And in most cases, the gravitational aether flow through a material object that is not resinously charged is too weak to have any noticeable physical effect on the internal structure.

Cathode rays on the other hand are a pressurized flow of aether which can be absorbed by material objects no matter how weak the rays are. The pressure in the cathode rays will discharge inside atomic and molecular matter, whereas with gravity there is no pressure to discharge.

Lightning

VI. Thunderclouds convert gravity into lightning. The clouds act as large capacitors which absorb some of the inflowing aether that is coming from above in the form of gravity. When the aether pressure builds up in the thunderclouds, they burst and the aether emerges in the form of pressurized bolts that we call lightning. Hence a negative electric current has been converted into a positive electric current as a result of thunderclouds acting like temporary aether storage reservoirs.

Ampère’s Circuital Law

VII. Maxwell showed that Ampère’s Circuital Law can be derived from aether hydrodynamics without the involvement of electrical particles. Mathematically, Ampère’s Circuital Law is another version of the Coriolis force. [3]
When a ray of aether passes through a magnetic field we would expect that ray to be deflected at right angles to its direction of motion since a magnetic field constitutes a sea of tiny vortices. This fact is indeed observed in the case of cathode rays.

References

http://www.wbabin.net/science/tombe43.pdf

[2] Originally, two kinds of electric charge were identified. Vitreous charge was identified with a presence of vitreous fluid, whereas resinous charge was identified with an absence of vitreous fluid. This division did not distinguish between centrifugal based vitreous pressure and source based vitreous pressure. Most of the static electricity experiments performed by DuFay, Franklin, and Watson would have involved vitreous charge that was ‘fine-grain centrifugal force’ based. In the present era, there is no official recognition of any science of aether hydrodynamics such as would enable a distinction to be made between positive charge (sourced based) and vitreous charge (centrifugal based).

Franklin applied the term ‘positive’ to vitreous charge in the belief that the vitreous fluid accumulated in vitreously charged bodies. But he got it the wrong way around. This error has been further compounded, and indeed deceptively cancelled out, by the fact that the vitreous fluid has been replaced in modern science by the negative electron cloud. This means that DuFay’s use of the term ‘vitreous charge’ would correspond to resinous charge as used in this article, and the term ‘negative electric current’ as used in modern textbooks will correspond to the term ‘positive electric current’ as used in this article. However, the notation as is used in this article best describes the concept that vitreous electric charge is a positive presence of vitreous aether pressure and that positive electric current is a flow of pressurized vitreous aether.