

Electrostatic Repulsion and Aether Pressure

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Abstract. In earlier articles of this series, electrostatic repulsion in connection with vitreous and resinous charge has been associated with fine-grain centrifugal pressure in the linearly polarized electron-positron sea. Magnetic repulsion has also been associated with fine-grain centrifugal pressure in the magnetized electron-positron sea, but the major difference between the two cases is that an increase in magnetization results in an increase in vorticity H , whereas an increase in linear polarization does not result in an increase in vorticity H . This article takes a closer look at the linear polarization mechanism for rotating electron-positron dipoles and concludes that the internal opposing force involves a centrifugal aether pressure that is induced as a result of the electron and the positron coming closer together for part of their mutual orbit. [1]

The Polarization Mechanism

I. In ‘The Cause of Centrifugal force’ at,

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

it was discussed how centrifugal force (codenamed G2 in this series) is caused by a build up of aether pressure that arises when gravity sinks become congested. It was suggested that tangential motion in a sink causes vorticity which in turn congests the sink.

We will now investigate the role of centrifugal force in the linear polarization mechanism. We want to make linear polarization a purely

potential energy affair without involving changes in either rotational kinetic energy or vorticity. However, in order to trap the aether pressure/potential energy, we will need to increase the centrifugal force. So we will therefore need to increase it without increasing the vorticity.

The linear polarization of an electron-positron dipole will have the effect of causing the two individual orbital paths to move apart and intersect each other. Gravity can bring about this effect, but only to a relatively small degree. When a body is resinously charged due to having its aether pressure reduced, the sinks in the body will open wider and the aether of the gravitational field will flow into the body at a faster rate. This might at least in part explain the general belief that the electric field is stronger than the gravitational field even though they are both essentially the same thing. It also explains the infinite supply of electric charge that is available to such devices as the electrophorous. As the aether pours into the resinously charged body at a faster rate than is the case with normal gravity, it will linearly polarize the electron-positron dipoles in the surrounding electric sea to a greater degree than normal. In a single rotating dipole, this will have the effect of bringing the negative and positive particles closer together at the moment of closest approach. In the electric sea as a whole, this effect will be augmented along the lines of linear polarization by virtue of the individual particles being made to come closer to their neighbours along the line of action. The overall effect will be that the sinks in the electron-positron dipoles will become more congested and there will be a back-feed aether pressure that will oppose the inflowing aether. This is the basis of Lenz's law as applied to linear polarization, and it can be justified in terms of centrifugal force. Centrifugal force takes on the mathematical expression v^2/r where v is the mutual tangential speed and where r is the radial distance between the two particles. We can therefore increase the centrifugal force by decreasing the distance r , yet keeping the rotational kinetic energy and the vorticity constant. And since centrifugal force is caused by congestion of the gravity sinks, it follows that this increased centrifugal force has been caused by increased congestion of the gravity sinks. In other words, linear polarization has a tendency to congest gravity sinks and to oppose aether inflow.

In the case of vitreous charge, a body will absorb aether due to an input of aether pressure from a positive electric current source. This input pressure will block the sinks [2], and so the aether will continue to flow radially outwards from the body and into the electric sea beyond, such as to linearly

polarize the electron-positron dipoles oppositely to that in the case of resinous charge. As in the case of resinous charge, the resulting overlap of the two individual orbits within each dipole will cause an increase in the internal centrifugal pressure which will oppose the applied aether pressure.

It follows therefore that electric field lines that emerge radially from either a vitreously charged body or a resinously charged body must contain a lot of aether pressure in the equatorial plane of the polarized electron-positron dipoles. When two like charged bodies (either vitreous or resinous) come close together, the fine-grain Coriolis force will ensure that the axes of these dipoles form solenoidal rings around a line that joins the two bodies. This means that the electric field lines between two resinously charged bodies or between two vitreously charged bodies will spread outwards from each other in such a way that there will be a lateral repulsion pressure acting between the field lines where the field lines from each body meet. This will push the two bodies apart. In other words, electrostatic repulsion between two vitreously charged bodies or between two resinously charged bodies is due to pure aether pressure. That aether pressure arises due to a combination of (1) centrifugal repulsion between neighbouring dipoles in their mutual equatorial planes, and (2) internal centrifugal repulsion within the dipoles that occurs as a consequence of linear polarization (Lenz's law).

This repulsion is present even between two gravitationally charged bodies, but in this case the effect will be overridden by the aether inflow, hence giving rise to a very subtle net force of mutual attraction.

When a vitreously charged body is brought close to a resinously charged body, the opposite polarizations of the electric sea surrounding each body causes the electric field lines to join directly between the two bodies. The aether then flows from the vitreously charged body to the resinously charged body. This will cause an attraction or a repulsion depending on which of the two is more strongly charged.

The Importance of Centrifugal Force

II. The existence of centrifugal force is denied in modern science despite the fact that its existence is unequivocally proved by virtue of the effects of absolute rotation. Centrifugal force is a radial expansion which occurs when

mutual tangential motion occurs. Aether hydrodynamics points us to four fundamental forces of which centrifugal force is one of these. In recent articles, a fifth fundamental force G5 has been mentioned in relation to pure aether pressure or pure aether tension. However in practice we would be hard pushed to find an example of G5 that was not ultimately sourced in either the inverse square law inflow/outflow force G1, or the centrifugal force G2. Practically all cases of mutual repulsion that are observed in everyday life are ultimately sourced in the G2 centrifugal force. Contact pressures are the consequence of the inter-atomic repulsive force which is almost certainly centrifugal in nature as a consequence of the atomic orbitals. The theory of flight ultimately depends on contact between the air molecules and the wing. Magnetic repulsion is due to centrifugal force acting in the equatorial plane between the electron-positron dipoles of the electric sea. Indeed, these electron-positron dipoles are the embodiment of centrifugal force. They are the DNA of centrifugal force, since all cases of centrifugal force are ultimately rooted in actions on the fine-grain level between neighbouring electron-positron dipoles. These dipoles are Maxwell's molecular vortices. Maxwell conceived of his molecular vortices on the very basis that centrifugal force in the equatorial plane of these vortices would be the cause of mutual repulsion between like magnetic poles. Centrifugal force is a mutually repulsive force that acts in tandem with the attractive force that is associated with aether inflow and it leads to an equilibrium node. We witness this partnership on many scales. The associated graph at figure 1 below is common to both inter-atomic forces and planetary orbits. It is the entire basis of physical stability. For planetary orbits, this graph is obtained by using Kepler's law of areal velocity to eliminate the velocity term in centrifugal force.

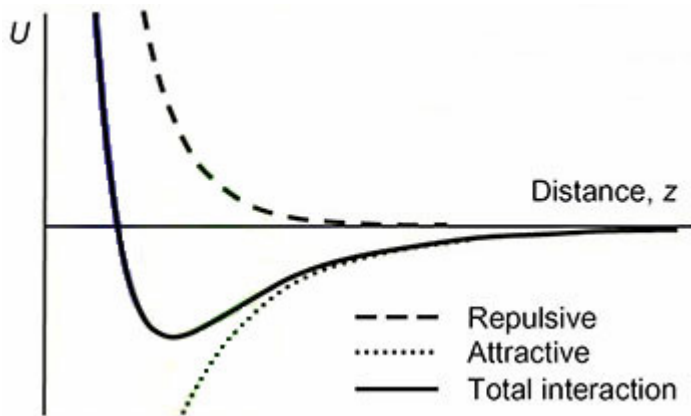


Figure 1. The inter-atomic force and planetary orbital force graph.

We can even witness centrifugal potential energy when we rotate a bucket of water. The water rises up at the edges of the bucket. But despite all of this, centrifugal force in modern science has been wrongly relegated to an illusion which is only ever observed from rotating frames of reference. And to make matters worse, some modern applied mathematicians have even extrapolated the formula for centrifugal force to apply to objects that are stationary but which are being observed from a rotating frame of reference. And in order to justify the lack of any centrifugal acceleration on such a stationary object, they have claimed that the centrifugal force is being overridden by a radial Coriolis force that is twice as strong. This is despite the fact that no Coriolis force exists in the absence of vorticity unless a radial motion is constrained to rotate. And even then, the Coriolis force would only be in the tangential direction. And even if such an inward radial Coriolis force did exist that was twice as strong as the supposed outward radial centrifugal force, then the net result would not be the artifact circular motion that is observed when a stationary object is viewed from a rotating frame of reference. The result would be a net inward radial acceleration.

There are some very serious misunderstandings regarding centrifugal force circulating amongst modern physicists and applied mathematicians.

The Centrifugal Force and the Background Stars

III. For centrifugal force to be invoked, we need to have an absolute rotation that is normally measured relative to the background stars. This then opens up the question regarding what physical role the background stars actually play in the induction of centrifugal force. In the paper entitled ‘Aether causes anti-Friction in the Planetary Orbits’ at,

<http://www.wbabin.net/science/tombe21.pdf>

it was discussed how the centrifugal force acting between mutually orbiting planets is actually occurring on the picoscopic scale between the electron-positron dipoles of the electric sea such as to create a hovercraft effect and hence avoid friction in space. This would suggest that for the purposes of the mutual tangential speed that is required to induce centrifugal force, the necessary physical interaction is with the background electron-positron sea and not with the background stars.

Ian Montgomery in Australia advocates his own version of a luminiferous medium that is composed of electron-positron couplets. He has expressed his belief that this electron-positron medium is in fact the basis of an absolute reference frame and that the background stars are too far away to have any physical effect locally.

Taking centrifugal force to be the acid test for absolute rotational motion, it would appear that it is indeed the close proximity of electron-positron dipoles that decides whether or not mutual tangential motion has occurred. If we were to remove the background stars, the Earth could still have tangential motion by reference to the electron-positron dipoles at the interface where the Sun's gravity gives way to the Earth's gravity. Since the Sun's magnetosphere doesn't appear to move very much with respect to the background stars, and since there are no discernable effects detected as a result of the Earth's orbital motion within the Sun's magnetosphere, then when we are measuring motion relative to the background stars, the physically interactive medium in question is actually the electron-positron sea.

References

[1] This article supersedes 'Gravity Reversal and Atomic Bonding' at,

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

In 'Gravity Reversal and Atomic Bonding' we needed to find a mechanism that would account for repulsion between polarized electric field lines in the electron-positron sea. Centrifugal force was considered to be the obvious choice based on Maxwell's model for magnetic repulsion. Centrifugal pressure could explain the mutual repulsion between electron-positron dipoles in their mutual equatorial planes, but we further needed to establish a link between increasing the degree of linear polarization and obtaining an increase in the resulting centrifugal pressure.

This immediately created the problem of how to increase the centrifugal pressure without increasing the vorticity. This problem was not satisfactorily resolved in 'Gravity Reversal and Atomic Bonding'.

[2] The blockage of the sinks inside atomic and molecular matter as a result of vitreous pressure will be due to a mechanism that is similar in principle to the polarization mechanism for electron-positron dipoles. It will however be more complex and it will vary in degree over the wide range of materials in their various states. The degree to which vitreous pressure will be absorbed will depend on many factors, one of which will be the electrical permittivity ϵ .