

Aether causes anti-Friction in the Planetary Orbits

Frederick David Tombe,
Belfast, Northern Ireland, United Kingdom,
Formerly a Physics Teacher at
College of Technology Belfast, and
Royal Belfast Academical Institution,
sirius184@hotmail.com
11th October 2007, Thailand

Abstract. In order to undermine the idea of a luminiferous aether, it has been argued that a physical medium for the propagation of light would necessarily cause friction which would eventually cause the planetary orbits to collapse. It will now be demonstrated how a dense electron-positron sea actually contributes towards Kepler's laws of planetary motion as opposed to undermining them.

The planets stay up in their orbits because of centrifugal force. It will be shown how this centrifugal force actually occurs in the shears lines of the electron-positron sea where friction might otherwise have been expected to occur.

Rotational Slippage and Translational Entrainment

Interferometer experiments along with observations of the Earth's magnetic field, rotating magnets, and stellar aberration have demonstrated to us that the electron-positron sea remains static during rotational motion of a large material body, whereas it is entrained gravitationally during translational motion.

This means that the aether vorticity caused by a rotating body on the large scale will be absorbed into the tiny fine-grain rotating electron-positron dipoles that permeate space. These dipoles will behave like a rotationally elastic sponge. This in turn will cause any associated centrifugal force to be dissipated and diluted into the electric sea in the form of a magnetic field as can be demonstrated by the 'Barnett Effect' discovered in 1915 by S.J. Barnett [1].

When a planetary body undergoes translational motion, its gravitational field will entrain the electric sea out to as far as where it becomes subject to the gravitational field of another planet.

Gravitational field lines between two planets spread outwards from each other. If one of those planets is much larger than the other, the gravitational field lines will be swept backwards in a long tail behind the smaller planet in a pattern reminiscent of the Earth's magnetosphere.

The translational motion of orbiting planets will result in shear lines in the electric sea where the two sets of gravitational field lines meet together. We need to take a closer look at the inter-particle forces in order to assess the question of friction.

The Irrotational Forces of Planetary Orbits

If we consider an object moving in an elliptical motion and analyze this motion with reference to its distance from the focus of the ellipse, it can be shown from calculus that the object must be subjected to two opposing radial forces. There must be a centrifugal force acting outwards and an inverse square law force acting inwards. The mathematical analysis is very specific about the fact that the centrifugal force must be involved as a distinct phenomenon in its own right.

Centrifugal force is what stops a planetary orbit from collapsing. We must however consider the presence of the electric sea that saturates the space between two planets. If centrifugal force is going to act between two planets that are entraining large regions of electric sea, then the centrifugal force can

only be occurring at the shear lines between the two entrained regions that are sliding past each other.

Kepler's laws tell us that there is no large scale vorticity in planetary orbital motion yet the velocity field patterns of orbital theory suggest that vorticity must exist. This dilemma can only be explained by virtue of the aether vorticity having been absorbed into the fine-grain rotations of the electric sea. The electric sea must therefore actually be ensuring that Kepler's laws and the law of conservation of energy are upheld. The electric sea must actually be serving as to cancel any possible friction at the shear lines.

Let us now take a closer look at what is going on between the electrons and the positrons at the shear lines in order to see if their alignment might in any way facilitate the involvement of centrifugal force and the reduction of friction.

The Polarization Question

In order to account for a cushion of centrifugal repulsion at the shear lines in the electric sea, we will need to have the electron-positron dipoles aligned in their mutual equatorial planes. This can only be possible, in the absence of magnetic effects, if the axes of the dipoles trace out solenoidal hoops that are centred around a line joining the two planets in question.

In the absence of magnetization we would therefore need to look at some other kind of distortion effect that would bring about this necessary alignment. We immediately look to the linear polarization effect which would follow the pattern of the gravitational field lines. See 'Gravity Reversal and Atomic Bonding' at,

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

An electron is an aether sink which attracts a positron because the positron is an aether source which emits aether at a lesser rate than that aether is being absorbed by the electron. The rotating electron-positron dipole is therefore a net aether sink and its gravitational charge is the result of the difference between the magnitudes of the electric charges of the two individual components.

These electron-positron dipoles will therefore be attracted by planetary bodies. The gravitational field of the planetary body will result in a linear flow of aether through the electron-positron dipoles, and since they cannot actually accelerate downwards, they will hence be subjected to a pressure. The difference in charge between the electron and positron will result in a differential effect and the aether pressure due to gravity will cause the dipoles to linearly polarize. The electron-positron dipoles can be viewed as tiny satchels of aether that fill up to a greater volume under aether pressure. An irrotational flow of aether will cause a linear stretching of these dipoles, whereas a rotational vortex flow of aether will have a tangential effect that will cause them to spin faster. The linear stretching is called polarization whereas the rotational stretching is called magnetization.

Linear polarization will cause the dipoles at the shear lines to meet in their mutual equatorial planes, hence inducing a pressure cushion of centrifugal repulsion. The planets' entrained regions of electric sea will hence glide over each other like hovercrafts.

This centrifugal cushion in the shear lines will have a number of effects. First of all, it will totally eliminate friction. Secondly, if the tangential velocity between the two planets is large enough, they will stay apart from each other. Thirdly, if for whatever reason, the gravitational field strengths should increase sufficiently, the two mutually attractive bodies will become mutually repulsive.

Stellar Aberration

The dual facts of stellar aberration and the Michelson-Morley experiment confirm beyond doubt that planetary bodies must entrain the luminiferous medium in their orbital motions.

There is however a difficulty with the case of lunar light aberration. It seems that lunar aberration does not occur. Providing that the great electric river does not flow between the Earth and the Moon at 30km/sec, then this would be in accordance with our expectations.

Harry Ricker suggested to me that the Moon is probably within the Earth's magnetosphere. Being a three body problem in which the Earth and the Moon share a common tangential speed of 30km/sec around the Sun, it is very probably the case that the Earth and the Moon collectively entrain a region of electric sea in their mutual orbit of the Sun. The Apollo astronauts are unlikely to have crossed the great 30km/sec electric river on their way to the Moon.

References

[1] Barnett S.J., "Magnetization by Rotation" Physical Review 6/4 (1915) 239-270