The Superimposition of Radiation and Gravity

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Abstract. Kepler's law of areal velocity ruled out Descartes' planetary vortex theory. Large scale net tangential force and most large scale vorticity is absorbed into the tiny rotating electron-positron vortices of the magnetic field. This segregates the rotational centrifugal pressure that is radiated outwards from the Sun in the form of electromagnetic radiation, from the irrotational centrifugal pressure that is generated inertially in the electron-positron sea at the interface between the gravitational field of the planets and the gravitational field of the Sun, and which holds the planets up in their orbits.

Descartes' Planetary Vortex Theory

I. In quite a few previous articles in this series, it has been stated that Kepler's law of areal velocity implies that there is no large scale vorticity in the solar system. The correct statement should have been that Kepler's law of areal velocity implies that there is no large scale net tangential force in the solar system, and that hence a substantial amount of large scale aether vorticity will be eliminated from the solar system, having been absorbed into the fine-grained vortices of the magnetic field. Net tangential force is a Lenz's law/Faraday's law effect that is associated with electromagnetic induction and electromagnetic radiation.

Descartes envisaged the Sun to be at the centre of a large vortex. The planets circled around in this vortex due to a balance between an inward

tendency and an outward centrifugal force. In reality however, the planets can orbit in any direction and in any plane, and this liberty is not commensurate with a single large scale vortex model. The large scale aether vorticity that is permitted by Kepler's law of areal velocity is generally limited to the immediate locality of the planets in orbit, and to deflection effects that are caused by the magnetic field, such as are observed in auroral phenomena. The principle vorticity in the solar system is in the electromagnetic field on the picoscopic scale. The electron-positron sea, which is the seat of the electromagnetic field, is a solid containing rotating electron-positron dipoles which are essentially compressible gas vortices. Hence we have a solid structure which is permeated with a gaseous juice that is rendered into tiny whirlpools. There will be a gaseous pressure in this solid in the equatorial plane of the magnetic field lines, and a tension in the axial direction of the magnetic field lines. Regions of the electron-positron solid that are in relative motion to each other will have a gaseous type interface which is oiled with centrifugal aether pressure.

Kepler's law of areal velocity means that we use the relationship $\mathbf{H} = 2\boldsymbol{\omega}$ in the Coriolis force term, where $\mathbf{H}$ is vorticity and $\boldsymbol{\omega}$ is the planet's angular velocity. This suggests that the electron-positron sea is a rigid solid. The $\mathbf{H} = 2\boldsymbol{\omega}$ relationship arises on the basis that the large scale vorticity in the electron-positron sea (as opposed to any large scale vorticity in the pure aether within it) will be of the kind that is associated with a body that is rotating as one rigid structure. That will indeed be the case as regards the electron-positron sea in the solar gravity field, as perceived from an orbiting planet. But this $\mathbf{H} = 2\boldsymbol{\omega}$ relationship cannot prohibit the electron-positron sea in general from being compressed, stretched or even torsionally stressed. We will have to consider the possibility that the electron-positron sea will permit some degree of large scale elastic deformation, and that it will not be totally rigid.

Solar Radiation

II. The Sun radiates energy in the form of electromagnetic radiation. We do not know the source of this energy, but it is radiated as fine-grained centrifugal aether pressure through the electron-positron sea. This radiation pressure will contribute marginally to holding up the planets in their orbits against the force of gravity. But the effect will be negligible when compared to the main centrifugal pressure which is generated in the electron-positron sea due to the tangential motion of the planets. This

latter centrifugal force is generated at the interface in the electron-positron sea where the Sun's gravitational field meets a planet's gravitational field. The solar radiation is electromagnetic induction, whereas the large scale centrifugal force that is induced by transverse motion of the planet is more akin to the magnetic force that acts on a current carrying wire.

The difference between the two kinds of centrifugal force lies only in the direction at the point of action in the electron-positron dipoles. The centrifugal pressure in the solar radiation gives rise to a torque which acts to angularly accelerate the electron-positron dipoles. Hence it mainly interacts with large bodies on their internal structure and not so much on their large scale motion. The centrifugal pressure that is generated at the interface region in the electron-positron sea due to the large scale tangential motion will act radially and push the entire planet and its extended region of electron-positron sea outwards from the Sun. An entire planetary system will be a bit like an egg yolk with an extended region of jelly around it. The Michelson-Morley experiment of 1887 was of course conducted entirely within the Earth's extended existence, and so the null result was in line with expectations on this basis. Stellar aberration, which occurs at the interface between the Earth's gravitational field and the Sun's gravitational field, confirms that the Earth and its extended region of electron-positron sea move together as one entity at 30km/sec. through the Sun's extended region of electron-positron sea.

Solar Gravity

III. The solar gravity is a rarefied aether inflow. Solar radiation is a pressurized outward movement of this same aether. Yet the two effects do not appear to interfere with each other in a major way. Solar gravity will cause linear polarization of the electron-positron sea in its path. This will complicate the outward radial electromagnetic radiation mechanism somewhat. We have already given an explanation for electromagnetic radiation in the equatorial plane of magnetic field lines, and an explanation for gyroscopic electromagnetic radiation in the axial direction of magnetic field lines. However, extra complications will be introduced when the electron-positron sea is also linearly polarized. We will have to consider the explanation for the case of linear polarization in the equatorial plane of the magnetic field, both for radiation that is into the direction of the linear polarization and also for radiation that is at right angles to the direction of the linear polarization. And we will also need to

consider the latter case for radiation that is in the equatorial plane of the magnetic field and also for radiation that is in the axial direction of the magnetic field. We will then need to look at these three cases again when the linear polarization is in the axial direction of the magnetic field. At any point in space, there will be superimposed electromagnetic radiation coming from many different sources and from many different directions, and with many different frequencies. All these multiple permutations start to make the individual motions of the electrons and positrons in the sea appear like Brownian motion, as if we have a sea of randomly moving electrons and positrons. But in fact there is a very high precision order to the whole mechanism such that moving pictures on a screen can be transmitted over long distances with near perfection. The electrons and positrons will be oscillating about average positions within a solenoidal double helix alignment.

As a consequence of the complications described above, magnetic fields do deflect aether flow, which means that they will deflect both electric currents and gravity. And electromagnetic radiation is deflected in a linearly polarized field, which means that it will be deflected in a gravitational field.

But these interaction effects, which have indeed been detected, are never of a very large magnitude where gravity is concerned. The general picture is that gravity flows freely into the Sun while electromagnetic radiation is radiated outwards in the opposite direction. We have two cases of aether flow in opposite directions which appear to slip past each other. It means that the Sun can radiate more energy outwards than it receives from the inward moving gravitational aether flow without upsetting the balance of the planetary orbits.

The Cross Over

IV. The reason why inflowing gravity can slip past outflowing electromagnetic radiation with only marginal interference, is to do with the different mechanisms involved in the two aether flow effects. Gravity is pure rarefied aether flow. However, electromagnetic radiation is a pulse of aether pressure which moves between two electron-positron dipoles. This transfers a net amount of aether without any actual flow as such. A new pulse is generated in the receiving dipole when it angularly accelerates and the old pulse is consumed when the dipole angularly decelerates. The overall effect is equivalent to a net flow of aether when

considered along the entire range of propagation. See section **III** in 'Cathode Rays, Gravity, and Electromagnetic Radiation' at,

http://www.wbabin.net/science/tombe53.pdf

So while the gravity is an actual flow of aether downwards, the solar radiation is a pressure pulse which moves through that aether in an upward direction. There will be a certain degree of superimposition of the two effects but it will be minimal.

Interestingly, the electromagnetic wave equation points to an aether flow solution, as opposed to a pressurized aether pulse solution. This is due to the fact that div $\mathbf{A} = 0$, where $\mathbf{A}$ is the aether field momentum. The explanation for this is that the electromagnetic wave equation is only describing the propagated angular acceleration effect in the electron-positron dipoles. It is not describing the centrifugal aether pressure mechanism that is bringing about the associated torque. See 'The Telegraphy Equation' at,

http://www.wbabin.net/science/tombe49.pdf