

The Connection between Gravity and Light

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27th July 2007, Belfast

Abstract. Gravity and light are two different manifestations of aether flow.^[1]

A study of the derivation of the famous equation $E = mc^2$, using Maxwell's equation for radiation pressure, explains the link between mass, energy, and aether. This allows us to conclude that electromagnetic waves must be accompanied by an effective flow of mass.

The main difference between gravity and light is the fact that gravity is a radially accelerating inflow of aether that imparts its acceleration to particles, whereas light is a tangential curled flow of aether that swirls from vortex to vortex at a constant root mean square (rms) speed.^[2]

Gravity will therefore affect the path of a light beam by superimposition of aether velocity, and light will cause pressure on physical objects.

Radiation Pressure

I. Light exerts a force on a physical target, probably due to longitudinal centrifugal compressions in the electric sea. See section VIII (Gyroscopic Radiation) in the article entitled 'The DNA of Electromagnetic Radiation' at,

<http://www.wbabin.net/science/tombe9.pdf>

Maxwell calculated this force associated with radiation pressure to be,

$$F = (1/c)dE/dt = dp/dt \quad (1)$$

where E is energy, c is the speed of light, and p is momentum. See page 42 (page 8 of the pdf file) of Dr. Carl A. Zapffe's book 'A Reminder on E=mc², ---' at,

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

By substituting $p = mc$ into equation (1), where m equals mass, we obtain the relationship,

$$c^2 dm = dE \quad (2)$$

which implies that an electromagnetic wave has got an associated mass which is related to its energy in the ratio of,

$$E = mc^2 \quad (3)$$

The problem that we now have in hand is how to interpret the physical significance of equation (3). How does an electromagnetic wave possess mass, and should an electromagnetic wave be affected by a gravitational field?

Dynamic Space

II. It was shown in 'Gravitational Induction and the Gyroscopic Force',

<http://www.wbabin.net/science/tombe5.pdf>

how space is a dynamic aether which obeys the laws of hydrodynamics, hence accounting for the Lorentz force along with the centrifugal force. In section VIII (Gyroscopic Radiation) in the article entitled 'The DNA of

Electromagnetic Radiation' it was shown how electromagnetic waves are a plane polarized propagation of angular acceleration moving in the equatorial plane of a sea of solenoidally aligned mutually orbiting pairs of electrons and positrons, and that in order to justify this idea we need to have an actual flow of aether from dipole to dipole.

In the same section it was concluded that the amount of aether present in an electron positron dipole is directly related to the amount of energy that is present therein as a consequence of either linear polarization or of magnetization.

In "Charge, Spin, and 'Charge to Mass' Ratio",

<http://www.wbabin.net/science/tombe10.pdf>

it was shown how inertial mass is a measure of the number of particles in a system. It follows therefore that since a particle is merely a sink or a source in the aether, and that since electromagnetic radiation is a flow of aether, that the flow of energy in electromagnetic radiation will involve an effective flow of inertial mass.

Gravity bends Light Beams

III. An important presumption in aether hydrodynamics is the fact that the aether will impart its acceleration to a particle but that it will not impart its velocity. Ideally the gravitational field at the Earth's surface should have an inflow velocity calculated from the escape velocity and equal to around 11.2km/sec. In practice however, the actual velocity will be the superimposed velocity of the radial aether inflow on top of all the velocities associated with any electromagnetic radiation that is flowing through the aether at the point in question.

This means that the velocity of the gravitational field should superimpose itself upon the velocity of a beam of light, and as such we should expect gravity to bend a beam of light or perhaps even prevent light from escaping from a planet if the inflow aether velocity should happen to exceed the speed of light.

In general, gravity and light should interact hydrodynamically in an electric sea comprised of tiny aether whirlpools.

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[1] The aether is space itself and it cannot be physically explained using any of the existing language of physics. The existing language of physics begins with the idea of particles moving in space and it cannot therefore be used to explain space itself.

It is a common error to liken the aether to a perfect continuous fluid. What is much more likely is that a perfect fluid is reflecting the underlying fundamental aethereal behaviour that is taking place in the space between the particles of the fluid, and hence causing the fluid to behave like the aether.

[2] The 1937 Encyclopaedia Britannica article on 'Ether' discusses its structure in relation to the cause of the speed of light. It says, "*POSSIBLE STRUCTURE. ___ The question arises as to what that velocity can be due to. The most probable surmise or guess at present is that the ether is a perfectly incompressible continuous fluid, in a state of fine-grained vortex motion, circulating with that same enormous speed. For it has been partly, though as yet incompletely, shown that such a vortex fluid would transmit waves of the same general nature as light waves _i.e., periodic disturbances across the line of propagation_ and would transmit them at a rate of the order of magnitude as the vortex or circulation speed - - - - -*"

The model described above can be reconciled with a dielectric sea of electrons and positrons (The Electric Sea) on the basis that an electron is an aether sink, a positron is an aether source, and that electrons and positrons occur in mutually orbiting pairs with their orbital axes tracing out Faraday's solenoidal lines of force. This would mean that Faraday's lines of force consist of double helixes of electrons and positrons, and that the double helix is therefore the most fundamental pattern in nature.

It is of further interest to read what John J O'Neill said regarding Tesla's concept of the aether.

"Long ago he recognized that all perceptible matter comes from a primary substance, or tenuity beyond conception, filling all space, the Akasha or luminiferous ether, acted upon by the life giving Prana or creative force, calling into existence, in never ending cycles all things and phenomena. The primary substance, thrown into infinitesimal whirls of prodigious velocity, becomes gross matter; the force subsiding, the motion ceases and matter disappears, reverting to the primary substance." (Grotz, 1997)

And according to Bernoulli,

"All space is permeated by a fluid Aether, containing an immense number of excessively small whirlpools. The elasticity which the Aether appears to possess, and in virtue of which it is able to transmit vibrations, is really due to the presence of these whirlpools; for, owing to centrifugal force, each whirlpool is continually striving to dilate, and so presses against the neighbouring whirlpools."