Re: "Einstein's Unfortunate Legacy #2"

Source: http://sci.tech−archive.net/Archive/sci.physics.relativity/2006−08/msg00341.html

- *From*: vertvergon@xxxxxxx
- *Date*: 25 Jul 2006 07:46:28 −0700

Tde wrote:

> "Einstein's Unfortunate Legacy #2"

Gravity is
revealed to be a force resulting from the release of mass energy due to
the
contraction of matter as a result of a reduction of elevation. The
subject
is treated in detail in
http://einsteinhoax.com/gravity.htm.

Vergon

An excellent post. It is a pleasure to see an intelligent dissertation
And I agree with almost all of it.

However, as to the assertion re gravity quoted above, I would like to
offer the following:

(If the equatons are too out of whack, I would gladly email them via
an attachment which will transmit them accurately.)

Some of the parameters referred to in the text may appear arbitrary or
assumed but in actuality they are results obtained in a much larger
work titled "The Quantum as a Physical Entity". The following
article is an excerpt from that paper.

QUANTUM GRAVITY

ABSTRACT

The attempt here is to explain the action of gravity (including action at a distance) entailing a physical representation. The key is a particle with quantum characteristics that creates a force resulting in attraction. Verification is achieved by a worked example that coincides with Newtonian physics.

We are faced with the question, what is the mechanics of action at a distance? In other words if space is truly empty, how can one body exert a force on another − especially at great distances?

The standard model proposes "virtual" particles which, in the case of gravity is given a name (graviton) and not much more. In the case of the electromagnetic force the virtual particle is the photon, for the strong force it's the pi meson.

The present theory has a different view. The electromagnetic force is a

symbiotic one consisting of two components, electric force and magnetic

force.

It is the negative electric force that binds the electrons to the positive nucleus and the positive electric force that repels the nucleons from each other.

This hypothesis contains a basic ultimate particle of the universe that has six measurable characteristics: (1) a spherical body of material that expands and contracts ad infinitum as it has no internal friction. The rate of oscillation is c and the extent is one light second. (2) The energy of expansion is 6.62566 x 10^−27 erg (3) a mass of 7.372 x 10^−48 gr. (4) spin (5) angular momentum (6) co−spatial ability in relatively small aggregates. In larger aggregates the density is such that additional units are rejected. These basic particles are dubbed "quanta". Notice, the mass to energy ratio is E/m = c^2 which rearranged is E = mc^2. Also, the energy of expansion and contraction is that of Planck's constant, h.

It is proposed that particles consist of the spherical quanta in a concentric pattern, expanding and contracting sequentially.

If we were to peer at an electron or proton or neutron from the polar perspective, due to the conservation of momentum we would see the inner core quanta rotating faster than the outer. This is the situation typical of the creation of a vortex force. Cyclones are an example. Objects are drawn to the center, then expelled. Tea leaves is another. Swirl the tea and observe the leaves go to the center of the cup.

We now discuss the gravity force. It will be found to be related to the strong force inasmuch as the vortex force of fermions comes into play. There is a major difference. Whereas in the case of the strong force the vortex force is between whole particles, in the case of gravity it draws individual quanta. Further, the interaction is unilateral as the quanta generate no force. But we are getting ahead of ourselves.

* * *

Consider the hypothesis that not all quanta in a material body are confined, and that some escape to be free, radiating outward in all directions at the speed of light.

We may consider this as analogous to the sublimation of solids.

It is yet to be determined whether this process is affected quantitatively by extremes of temperature. Beyond that we may assume that all matter, regardless of physical or chemical composition, emanates individual quanta at the same rate, viz., the emanation is a function of fermions regardless of how they are grouped. Further, the rate of emanation as a certain percentage of the total mass, is constant. [Be aware that this is an assumption. It may well turn out that there are conditions of the state of matter, temperature or massiveness, that alter this rate −− and in turn alter the force of gravity. However, for the present, we proceed on this assumption.]

In summation we assume that a portion of a given mass is radiated in all directions as solitary "gravity quanta" and that the portion is constant. Collaterally we also assume that all grouped quanta (atoms) in a body simultaneously absorb all available free quanta arriving in their vicinity. (Recall that free quanta have a diameter of one light second.)

We now consider the absorptive process. "Absorption" is not a wholly accurate term because by the present hypothesis the free gravity quanta are not absorbed so much as they are drawn into the body with such great rapidity as to also draw the absorbing body toward the quanta, which is the same direction as the emitting body. Since this process is mutual, there appears what is interpreted as a "mutual attraction" and "action at a distance". This is an illusion.

The question arises, what is the nature of this drawing force? In the case of the strong force, it can be shown that due to their spin, protons and neutrons develop a vortex force that mutually draw neighboring nuclei together. It is this same vortex force that draws ambient quanta into the nuclei. One observes this centrally directed force in a cyclone. As all nuclei draw simultaneously, the more nuclei present the faster ambient quanta are ingested.

Let us now quantify the gravitational process.
(temporarily setting general relativity aside)

STANDARD CONDITIONS

(Two one−gram masses one centimeter apart)

$F = G = 6.672 \times 10^{-8}$ dyne

The assumed mechanism will be shown to be commensurate with the usual mathematical expression for gravity interaction:

$$F = \frac{G (m_1 \times m_2)}{d^2}$$

We now quantify the quantum sublimation of matter. To do this we discuss gravitational force in terms of energy under standard conditions. It is evident that $F \times 1$ cm $= E_k$. Thereby, a body OF 1 gram having a force F exerted on it, will possess a kinetic energy of the same coefficient as the force when it moves 1 cm. By designating the quantity as dyne−centimeters, we keep this relationship constantly in mind.

Since potential and kinetic energy are interchangeable and conserved in a closed system, it matters not whether we consider the energy associated with the bodies under consideration as potential or kinetic, what is essential is that we consider the energy and recognize that it is created by the force G.

Having ascertained the energy existent between two bodies under standard conditions, we can immediately determine the equivalent mass from the familiar $m = E/c^2$.[This is of the same genre as radiation where $E = mc^2$.] In the standard case we assert that mass to be the mass equivalent of G.

(1) Contemplating the standard condition,

$$F = \frac{G\ 1 \times 1}{1^2} = 6.672 \times 10^{-8} \text{ dyne}$$

m = mass = 1 gr G = gravity constant

d = distance between the masses = 1 cm

(2) If the force applied travels 1 cm, we have

$F \times 1\text{cm} = E = 6.672 \times 10^{-8}$ dyne centimeter (erg)

and $\frac{E}{c^2} = m$

therefore, the mass equivalent of G is

$$S = \frac{6.672 \times 10^{-8}}{c^2} = 7.423597 \times 10^{-29} \text{ gr} .$$

Thus we conclude that the mass of the energy between the weights is 7.423597×10^{-29} gr and is the quantity sublimated each second from 1 gr. And so we term this sublimated mass, S.

The reason for taking S as the sublimation of one gram instead of two is that the force resulting from S is common to both. That means each weight draws that amount from the other, which in turn means each one gram mass sublimates S (7.423597×10^{-29} gr per sec) to be absorbed by

the other.

The correctness of this is displayed in the worked example at the end of this section.

Since S is stated for one gram then we can say that it represents the portion of mass sublimated for any mass. Thus (in grams) $m \times S$ is the total mass sublimated from any body. We designate that m_S, "mass sublimated".

(where h_0 is the minimum energy in the universe − to be explained later)

We note that by $n = \frac{m}{m_q} = \frac{E}{h_0}$ we can ascertain the number of

quanta comprising the 6.672×10^{-8} erg (or 7.423597×10^{-29} gr).

This turns to be 1.006994 x 10^19 quanta.

We now ask, if 1.006994 x 10^19 quanta produce 6.672 x 10 ^−8 erg, then what part of an erg would one quantum produce? That is to say, how much potential energy exists between one quantum one centimeter from one gram?
(This is equivalent to being an ambient quantum the surface of which is in contact with the drawing mass.) We write

1.006994 x 10^19 quanta 1
−−−−−−−−−−−−−−−−−−−−−−−−−− :: −−−−−−−
6.672 x 10^−8 erg x erg

and we see x = h_0 .

(Note, h_0 = 6.62566 x 10^−27 erg.)

Thus we show that a 1 gr mass will attract one ambient quanta (1q , or Q) with h_0 energy or |h| dyne of force at one centimeter. Thus, G is quantized, that is to say gravity is quantized.

−−
Note:− Henceforward we will refer to sublimated quanta as "gravity quanta", "free quanta", or "ambient quanta" and assign them the symbol, Q.

"Ambient quanta" are specifically gravity quanta that are in proximity to an absorbing body and subject to absorption.
−−

Note that

1.006994 x 10^19 h_0 = |G|erg. and

|G|erg
−−−−−−−− = G dyne .
1 cm

−−
It will be noticed that there is a plethora of familiar constants in which the coefficient of the constant appears but has mismatched dimensions. This arrangement is practically incestuous.

We will display these quantities in their symbolic form but bracket the

mismatched coefficient symbol; thus we remain aware of the tight interrelation of a relatively few basic quantities and at the same time emphasize the simplicity, rhythm, and beauty of the universe. It is this simplicity and rhythm that forms a fractal−like construction of the universe.

−−

In reiteration, 1.006994 x 10^19 ambient quanta correspond to G dyne or

6.672 x 10^−8 dyne .

Therefore, 1 quantum cor |h|dyne. That is, one ambient quantum will produce |h| (6.625661 x 10^−27) dyne per gram absorbing it.

It is assumed that bodies radiate individual quanta, i.e., gravity quanta at the same velocity as any other radiation −− c.

The mass loss would also be the same: E/c^2.

The acceleration of ambient quanta drawn into proximate bodies is tremendously high. (For all practical purposes the acceleration is pseudo, the velocity of absorption can be considered attained instantaneously.)

(For 1 gram, nQ = m x S/m_q)

F_Q = force per gravity quantum = G/nQ = |h| gr cm/sec^2 = |h|dyne.

We note that the absorbing body also is drawn toward the incoming quanta which means it is drawn in the direction of the emitting body. This creates the illusion that the absorbing body is being drawn to the emitting body. Thus there is the illusion of action at a distance.

MINIMAL CONDITIONS

The minimal condition, signified by the subscript 1, is a function of the natural, i.e., uninfluenced emission of quanta. It is a result of the internal (potential) energy of the quantum solely

Where
m = mass
a = acceleration
d = distance
t = time

Note: The second is arbitrary and chosen as the absolute minimum unit
of time .

LS
Action = h = m a d t = m_q −−−−−−− LS 1 sec
sec^2

c LS h m a d t
a_1 = −−−− = −−−−−− = −−−−−−−−−−−− = −−−−−−−−−
sec sec^2 m_q LS sec m d t

h m a d t h
t_1 = 1 sec = −−−−−−−−−−−−−−−−− = −−−−−−−−−− = −−−
m_q LS LS m a d h_0
−−−−−
sec^2

h m a d t
P_1 = m_q c = −−−− = −−−−−−−−−− = 2.210082 x 10^−37 gr cm/sec
LS LS

/\ P_1
F_1 = −−−−−−−−− = m_q a_1 = 2.210082 x 10^−37 gr cm/sec2
sec

E_1 = F_1 d_1 = F_1 LS = h_0 (d_1 = diameter of quantum)

h m a d t
v_1 = a_1 t_1 = c = −−−−−−−− = −−−−−−−−−
m_q LS m d

Note: c is the absolute minimum on the quantum level.

LS h m a d t
d_1 = −−−− = LS = −−−−−−− = −−−−−−−−−
1 m_q c m a t

Note: d_1 is the minimum basic unit on the quantum level.

The parameters h, F_1, P_1, and E_1 (or h_0) are absolute minimums found
in nature.

==

Before proceeding it may be well to review a few key shorthand notations.

Q = 1 nascent or gravity quantum.

$S = 7.423597 \times 10^{-29}$ gr = portion of mass sublimated per gram per sec.

mS = sublimated mass, i.e., portion of body sublimated per second (grams).

$NQ = mS/m_q$ = number of Q per second sublimated by a body of mass m.

$n_q = m/m_q$ = number of quanta comprising a body. Usually given as n when the mass is known and used frequently.

nm_q = mass of a body

$$nQ = \frac{mS}{m_q d^2} \text{ or } \frac{NQ}{d^2}$$ = number of Q emitted/sec by a mass that are available at a distance from that mass.
(ambient quanta)

Note: It is not necessary to calculate the number of quanta in an area at d because the diameter of the ambient quanta is 1 LS and the size of the absorbing body is miniscule by comparison. So any quanta the center of which are ½ LS from the body will be absorbed.

$N_q = n_q * nQ$ = total *interacting* quanta. Represents the number of quanta in an absorbing body (n_q) interacting with the number of ambient quanta, nQ.

(Note: For gravity purposes, the number of quanta in a body is the only way to ascertain the mass of the body irrespective of its fermion composition.)
==

A WORKED EXAMPLE

We shall concern ourselves with the gravitational attraction of the moon (M) and earth (E) for which some of the parameters are known. There is one disadvantage which is that these parameters are approximate (at least as given here). However, for purposes of illustration, they shall suffice.

(where m = mass, d = distance, r = radius, a = acceleration (at Earth's surface 45 degrees from the equator).

mass of earth $m_E = 5.98 \times 10^{27}$ gr

mass of moon $m_M = 7.36 \times 10^{25}$ gr

distance earth−moon $d_{E-M} = 3.8 \times 10^{10}$ cm_ _

radius of earth $r_E = 6.37 \times 10^8$ cm

acceleration at earth's surface $a_{E\_sur} = 980.665$ cm/sec^2

Step (1)

We ascertain by standard form the gravitational attraction between E and M , which we write F_{E-M}.

Gravity can be expressed either as a force or in terms of acceleration.

By the standard equation,

$$F = \frac{G\, m_E\, m_M}{d_{E-M}^{\ 2}} = 2.033611 \times 10^{25} \text{ dynes}$$

From $a = \frac{F}{m}$ we obtain

$a_E = 3.400687 \times 10^{-3}$ cm/sec^2 (acceleration of E toward M)

$a_M = 2.763058 \times 10^{-1}$ cm/sec^2 (acceleration of M toward E)

(We set aside the counteracting conditions as not germane to the example.)

We note that whereas F is common to both bodies, the acceleration of each is different being inversely proportional to its mass.

Next, we note the condition of emitted gravity quanta spreading along the expanding surface of an imaginary sphere; thus quanta available for absorption diminish in numbers inversely proportional to d^2. Quanta available for absorption are called ambient quanta.

Step (2)

We calculate nQ, the number of nascent quanta from the moon that are in the vicinity of Earth, i.e., ambient quanta

$$nQ = \frac{\frac{m_M}{m_q} S}{d^2} = 5.132600 \times 10^{23} Q$$

Step (3)

Next we recall that one gram matter attracts one Q with |h|dyne of force.

So $m_E \times |h|$dyne $\times$ nQ = attraction force = $2.033611 \times q^{-25}$ dynes.

We see that this is the same as given by the standard equation.

We now calculate the acceleration of a body at the surface of the Earth:

$$NQ = \frac{m_E S}{m_q} = 6.02 \times 10^{46} Q$$

Since the mass of the earth acts as though it were all at the center, we calculate the number of quanta at the surface:

$$\frac{6.02 \times 10^{46}\, Q}{(r_E^2)\,(6.37 \times 10^8)^2} = nQ \text{ at the surface.}$$

So the force exerted on bodies at the surface is

$|h|\text{dyne}\ nQ = 983.3 \text{ gr cm/sec}^2$

which is the number of dynes per gram. We can write acceleration as

$$a = \frac{F}{m}$$

where F ($|h|\text{dyne}\ nQ$) is multiplied by the number of grams of the body.

Since m is the same number of grams, the two cancel leaving

$a = |h|\text{dyne}\ nQ = 983.3$ cm/sec at the surface.

Given: $a = 980.665 \text{ cm/sec}^2$ (at latitude 45 deg.)

THE QUANTIZATION OF GRAVITY

Gravitational action is not customarily thought of in magnitudes on the

order of c because the response of ponderous bodies results in velocities extremely small compared to that of light, nor is it thought of in terms of typical quantum magnitudes because it is such a weak force that determinations of micro proportion are difficult or considered insignificant.

However, the concept here is that the mechanics of gravity in its initiating form employs free quanta traveling at c, and the dimensions of which are on the order of c. Absorption velocity must necessarily be

of much greater magnitudes.

Thus we see gravitational action as initiating on the quantum mass level but altered by the factors nQ and nq to magnitudes we usually associate with gravity.

Whereas one usually thinks of quantum magnitudes as being very small, in gravitational mechanics we are dealing with a broad spectrum commencing with the large dimensions of individual quanta having micro mass which are modified by large numbers of quanta and great velocities to evolve into what appears as a mechanics of macro proportions only.

QUESTIONS

We pursue some inevitable questions regarding the sublimation of mass. We propose here that all bodies radiate gravitational quanta which represent

7.423597 x 10^−29 gr or one part in 1.347056 x 10^28 per second.

The question arises, is this loss detectable? Probably not because (a) it is so miniscule, and (b) each body also receives ambient quanta from other bodies which compensates for the loss. Thus the individual quanta may be thought of as the "virtual" or exchange particle of gravity (although the mechanics is different).

Other questions: Is the sublimation rate variable for any reason? For example, would near absolute zero temperatures affect the rate? If not, what would? And, is any of this detectable with present day technology?

Collaterally, would extremely high temperatures affect S?

Also, might a body of great mass (ten suns or more) affect sublimation?

In summary, in regard to the basic questions of gravity the present theory has ascertained or explained quantitatively and qualitatively

(a) action at a distance −− and its corollary

(b) mutual attraction

(c) the gravity "virtual" particle or "gravity wave"

(d) the force engendered

(e) portion of mass radiated as gravitational quanta.

What we are in need of is a more exact picture of the mechanism of absorption.

At this juncture we picture a continuum of free quanta approaching a body at c and being drawn in at an increased velocity proportional to the number of particles comprising the body. Thus the conclusion is that all particles of the body simultaneously draw on each and every ambient quantum the more particles (mass) comprising the body, the faster the draw and consequently the greater the force.

As a given quantum is drawn in it must, being indivisible, be eventually pulled away from other absorbing quanta and become an integral part of a single fermion.

But what is the cause or mechanism of absorption, and how do we quantify it?

At base we believe the mechanism must be the vortex action described for the strong force. This is the most logical prospect.

However, taking the vortex force as 8.455122 x 10^−22 dyne as given at the full radius of a single proton, and applying it to an ambient quantum, the resultant −− by rough estimate −− is found to be too great, i.e., greater than gravity by twenty eight orders of ten.

Of course there are differences. The strong force operates between two nuclei extremely close to their centers whereas the gravity situation has many fermions spread over a wide range absorbing inactive ambient quanta. In addition these quanta are impacting at c. This c has to be absorbed and then surpassed before a force can be exerted in the direction from which the quanta are arriving.

In addition, in the final stage the absorbed quantum is drawn in many different directions and, because it is indivisible, finally absorbed by only one fermion. All these conditions must result in a reduction of force. However, it is extremely difficult to quantitatively assess them.

REGARDING CURVED SPACE AND THE PRESENT THEORY OF GRAVITY

Apparently the universe is comprised of a cluster of galaxy clusters.

We know that galaxies rotate −− and so do virtually all things in cosmology and on the quantum particle level.

Thereby, we ask: Does the universe rotate?

If so, we ask

(a) What is the effect of rotation as to centrifugal force?

(b) How would rotation affect Doppler readings?

(c) Does light from distant sources undergo the Coriolis effect?

(d) Do gravity quanta suffer the coriolis effect?

(e) If so would that not create the illusion that space is curved?

V. Vergon

1980 − 1995

End

.