"Einstein 1, Quantum Gravity 0"?

This heading repeats the title of the paper [1] published by *Science* magazine of August 2003, where it is affirmed that "…quantum gravity remains undetectable".

As I ascertained earlier [2], *the observed frequency shift of γ-quanta (photons) in a gravitational field [3-6] is a manifestation of quantum gravity*. This phenomenon is the consequence of the law of energy conservation at photon emission in a gravitational field expressing by the *quantum equation* [7,8]

$$M^* c^2 + M^* \Phi = Mc^2 + M\Phi + h\nu_g . \qquad (1)$$

Here M^* is the mass of an excited nuclei (atom), M is its mass in the ground state, Φ is the gravitational potential. Whence it follows

$$\nu_g = \nu(1 + \Phi / c^2) , \qquad (2)$$

where ν is the photon frequency in the absence of gravitational field. Just this equation is described the gravitational redshift. Thus, one can say that the "age" of quantum gravity is over 40 years.

But the very essential is that *Eq.(1) forms the foundation of the quantum theory of gravity* (quantum gravidynamics) [9]. Therefore, one can say that this theory (it is considered as the first one among the greatest unsolved problem in physics [10]) was already conceived 6 years ago.

As to the first part of the heading I hold the opinion [11] that "Einstein's special relativity" would be named "Lorentz-Poincare-Einstein-Minkowski's relativity theory".

Vyacheslav Strel'tsov   strlve@sunhe.jinr.ru

References
[1] A.Cho, "Einstein 1, Quantum Gravity 0", Science **301**, 1169 (2003).
[2] V.N.Streltsov, "The Incompatibility of General Relativity with Quantum Mechanics", J. of Theoretics **6**, No.2 (2004); NPA Newsletters **9**, No.1, 5 (2003).
[3] R.V.Pound & G.A.Rebka, "Apparent Weight of the Photon", Phys.Rev.Lett. **4**, 337-341 (1960).
[4] J.C.Hafele & R.E.Keating, "Around-the-World Atomic Clocks: Predicted Relativistic Time Gains", Science **177**, 166-168 (1972).
[5] C.O.Alley et al., **Experimental Gravitation**. Proc. conf. at Pavia, ed. B.Bertotti (Academic Press, 1977).
[6] L.Briatore & S.Leschiutta, "Evidence for the Earth Gravitational Shift by Direct Atomic-Time-Scale Comparison", Nuovo Cimento **37B**, 219-231 (1977).
[7] V.N.Strel'tsov, "What Testifies the Experiments on the Measurement of a Gravitational Red Shift", JINR Commun. P2-98-300, Dubna, 1998.
[8] Idem, "On the Gravitational Redshift", Apeiron **6**, 133 (1999); "Special vs. General Relativity", Ibid., 243.
[9] Idem, "The Principal Solution of the Greatest Problem in Physics (Quantum Gravity)", J. of Theoretics **4**, No.3 (2002).
[10] "Einstein tops physicists pop chart", CERN Courier **40**, 1 (2000).
[11] V.N.Strel'tsov, "Einstein Reconsidered (Re: *Infinite Energy* discussion)", J. of Theoretics **4**, No.6 (2002).

A Space Density Problem

Dear Dr Siepmann,

   Light is emitted at A in two directions to the mirrors, the left hand path passes between two massive bodies the right hand path does not. I believe that they will arrive at different times at B. I wonder if you concur with this observation? I am foggy as to whether this is predicted by Minowski space time but I know another expert who I can ask about this. I thought it might differential between Dense space and Minowski space time.

Piers Newberry piersnewberry@hotmail.com
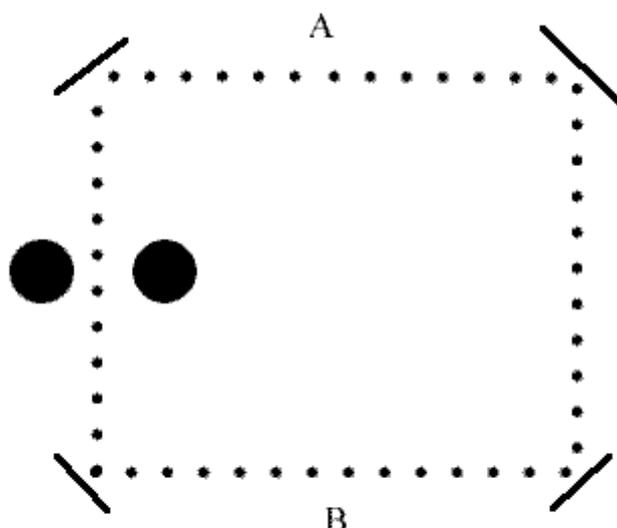
Dr. Siepmann responds:
   If you add that the two massive devices are equal in mass and equidistant from the light path, then yes Dense Space theory would slow down the left hand photons while I think that Minowski space time would say there would be no difference since the effective gravity on the light path would be zero. The reason why it would be slowed with Dense Space is that even though the gravity is effectively zero at the left light path, there is an increased density of Space around the gravitational bodies and especially in between them while Minowski space time just looks at the gravity at the path which would be effectively zero and therefore no effect. I have an article coming out in this next issue which I will add your problem as a demonstration of this difference (Proving that Space Density Theory is Different and More Complete than Spacetime). Thank you.

The Truth about Smoking

Dr. Siepmann,
   I thoroughly enjoyed reading your article, "Smoking Does Not Cause Cancer."
It was just a few weeks ago that I was listening to a radio talk show host interviewing a panel of noted doctors on the risks of various cancers. The focus was on the potential of genetic engineering in fighting cancer. Their statements presented a "new twist" on statistics – not the

fact that (as you clearly pointed out) smoking significantly ***increases*** the risk of acquiring lung cancer, but the fact that most regular smokers ***don't*** develop the disease. If it were the case, then every lifetime smoker would die from lung cancer. Like you, I was surprised to hear some of the statistics that were tossed around by these doctors.

None on the panel denied the hugely elevated risks of smoking. But the more compelling story for the listeners and those who called in was this single "curious" fact – a fact that statistics always supported but most chose not to express: in most cases, smoking does not lead to lung cancer. In summary, their three major points were these:

- Anti-smoking campaigns should continue. Statistics continue to prove that reducing the number of smokers in our population will reduce the incidence of lung cancer (not to mention reduce heart disease and the complications of asthma and respiratory illness, reduce accidental home fires, forest fires, etc.).
- Research on the causes of cancer should continue. Additionally, special emphasis on stem cell research and related genetic studies should focus on our population's variable abilities to resist these cancers. Smoking does not "cause" lung cancer any more than drinking causes car accidents.* It sure in heck elevates the chances but the knee-jerk cause/effect can divert our attention away from additional, more obscure or stubborn roots.
- Take the media to task on their use of the English language!

*Here, however, I think you should reconsider your analogy, "Yes, smoking is bad for you, but so is fast-food hamburgers, driving…". We all must eat, and for most, a car is essential. There is no fundamental need whatsoever to smoke.)

Sincerely,
Bruce Scottow bruce@sevenblueseas.com

Dr. Siepmann responds:

Thank you for your email. There are many myths about smoking. You may find interesting and informative, the section called The Truths & Myths about Smoking at www.freedom-of-choice.com . Again for the average person, they should not be smoking but for a select subgroup the benefits may outweigh the risks (see below from www.freedom-of-choice.com). Everything can be good for you or kill you, it just depends on how it is used and in what quantities. For instance, did you know that drinking too much water can kill you and I don't mean drowning and some poisons used are used to treat cancer. Everything needs to be put into perspective.

Myth: Smoking has no medical benefits.
Truth: It helps to prevent the development of neurodegenerative disorders such as Parkinson's and Alzheimer's disease. It may also be helpful in ADHD, schizophrenia, and depression. Smoking has been found to be relaxing for beneficial for some anxiety disorders and people with type A personalities. In fact, taking away smoking from some subgroups can increase their medical problems and chance of dying). Smoking like caffeine can help a person get going in the morning and improve their energy state.[7] Though some of the benefits from smoking may be due to some individual components such as nicotine, studies need to be done and an effective means of administration needs to be developed.

References:
1. "A statistically significant inverse association between smoking and Alzheimer's disease was observed at all levels of analysis, with a trend towards decreasing risk with increasing consumption" (International Journal of Epidemiology, 1991). "The risk of Alzheimer's disease decreased with increasing daily number of cigarettes

smoked before onset of disease. . . . In six families in which the disease was apparently inherited . . . the mean age of onset was 4.17 years later in smoking patients than in non-smoking patients from the same family" (British Medical Journal, June 22, 1991). "Although more data are needed . . . [an analysis of 19 studies suggests] nicotine protects against AD" (Neuroepidemiology, 1994). Nicotine injections significantly improved certain types of mental functioning in Alzheimer's patients (Psychopharmacology, 1992).

2. Over 20 supporting references at http://www.forces.org/evidence/carol/carol16.htm.
3. Allam, M. F., M. J. Campbell, et al. (2002). "[Parkinson's disease and smoking: coherence and plausibility]." Rev Neurol 34(7): 686-9.
4. http://www.medicalnewstoday.com/index.php?newsid=6544 .
5. http://www.medicalcrossfire.com/debate_archive/2000/dec_00/Nicotine.htm .

About the LightClock

    Here is another light clock idea. If the apparatus is traveling to the right at a slow enough speed light sent from lower mirror to upper mirror bounces once off the upper mirror and misses the lower mirror.

    If the apparatus is traveling faster light sent out at the same angle will bounce off the lower mirror. If the angle was adjustable, and you could count bounces could this perhaps be some sort of absolute speed / time measurement device?

Light Clock

Slower   Faster

Direction of travel
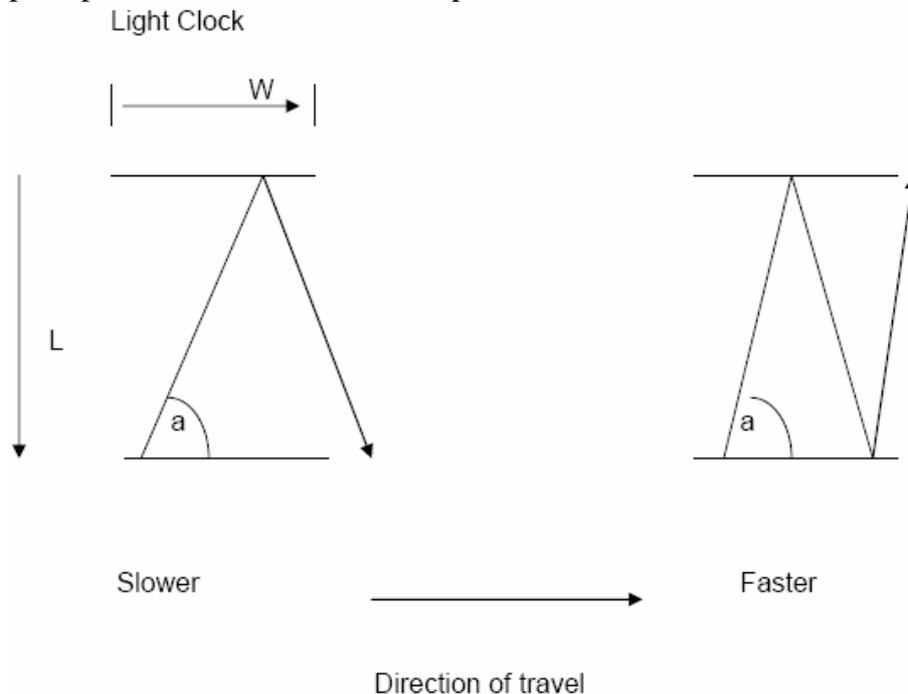
    I got this idea while reading an article at http://www.ling.su.se/staff/hartmut/uhr.htm. I do not believe the results of Hafele and Keatings experiment were accurate nor were they interpreted correctly.

Pat Kirol, sunwukong@hananet.net

Gravity and Spacetime

    If we assume that space-time is a fabric and behaves like any material with an elasticity constant k, and we assume that a particle of a given rest mass is just the potential energy stored

in this fabric due to compression or tension of the fabric, then we arrive at the following relation:

$$(\text{mass-particle})(c^2) = (k)(x^2)/2,$$

where c = speed of light and x is the displacement in the space-time fabric that produces the potential energy change. This simply states that the rest energy of a particle is equal to the potential energy change (locally) in the fabric due to compression or tension on the fabric. It is interesting to note that if we rearrange this relation to:

$$(\text{mass-particle})/(x^2) = k/(2*c^2),$$

and we substitute in the values for mass-particle = 1.67×10^{-27} Kg (proton mass) and x = 2.05×10^{-14} meters (distance which the strong-force acts over for Hadrons), that the constant that comes out for k = 1/(Hubble's constant). Therefore, the stretch factor or elasticity constant k is equal to the expansion constant of the Universe (H).

Also, $k(c^2)/2$ is the same as found above for the proton when we substitute in mass-particle = mass-Universe = 1.44×10^{53} Kg and x = radius of Universe = 1.9×10^{26} meters, or when we substitute in mass-particle = 1.0×10^{-69} Kg and x = Planck Length, where the mass-particle in this case is most likely the smallest mass possible or the mass of the photon (with the smallest distance gravity can act over - the Planck Length).

If we multiply $(\text{mass-particle})/(x^2)$ by G then we have the acceleration due to gravitational force that this particle produces - derived from assuming that space-time is an elastic fabric. Is the gravitational force equivalent to this stretch in space-time (i.e., General Relativity)?

Michael Harney   mharney@signaldisplay.com

Journal Home Page