Professor 't Hooft reaction on *AAAS tolerates Structural Science Fraud* .

From Hooft, G. t September 26, 2010

Who to believe: the geniuses of Theoretical Physics or a crackpot?

Indeed.

There's no violation of energy conservation either in Thomson or QM.
Think of this: energy and momentum density (such as that of an EM field)
do not transform as a 4 vector but as a 4x4 tensor. You forgot to include
the effects of stress. That explains your factor 2.

G. 't H

From C. van der Togt September 27, 2010

Dear professor 't Hooft,

With math anything that is bend can be made straight and vice versa. *
The theoretical basis for QM is the Electromagnetic Theory (EM). Should experimental science not lead the way?
There is a simple fundamental physics experiment that never has been performed by anyone that will prove without any doubt whether the EM-theory and therefore QM are physically correct.

At your physics department at the University of Utrecht they can perform this Fundamental Physics Experiment easily.
This experiment will demonstrate whether all the mathematical characteristics Theoretical Physics assumes electromagnetic fields posses are for real.

Dear professor 't Hooft do you dare to let an experiment determine the fate of Physical Science?

I'm prepared to pay for all the costs of this experiment, but are you prepared to let this experiment determine whether QM is false?

Sincerely,

Carel van der Togt

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* With this remark I mean that with math ad hoc corrections can be made. For example when Thomson violated the energy conservation law and "lost" 1/3 of the mass-energy of the electron this mistake was "corrected" by adding the lost 1/3 mass-energy by suggesting that there must be 1/3 mechanical mass-energy. Although this mechanical mass doesn't exist the initial "lost" 1/3 is compensated; physically false but mathematically the mass-energy is correct.

From Hooft, G. t September 29, 2010

There are hundreds of thousands experimental tests of electromagnetism and of quantum mechanics. There is no physical violation if the mathematics is done correctly.

G. 't H.

From C. van der Togt September 29, 2010

Dear Professor 't Hooft,

Hundreds of thousands different experimental tests or the same test hundreds of thousands time performed?
Either way the essential fundamental test, to determine whether a parallel proton beam and electron beam, where the particles move in the same direction, repel as is **assumed by EM and QM** has never been performed.

The above mentioned experiment is **fundamental and essential** for the validity of EM and QM.
Hundreds of thousands experimental tests have been performed but never the fundamental essential experiment I propose!

There cannot be, from any scientific perspective, any objection to perform this experiment and so broaden the basis by which EM and QM are experimentally confirmed.

Further you say "*There is no physical violation if the mathematics is done correctly*".
I agree on this. My point is that the mathematics by Thomson, Feynman and QM is not done correctly **regarding the physics** that is involved. The short and simple article " ***The Equivalence of Magnetic and Kinetic Energy*** " proves this in section 4 "***The electromagnetic Mass***"

When, as you say, Thomson and QM do not violate the energy conservation law then the the article "**The Equivalence of** .." must be incorrect. Please inform me what error is incorporated in the article.

Sincerely,

Carel van der Togt

From Hooft, G. t September 29, 2010

hundreds of thousands of totally different experiments.
Your equation 6 suggests a mistake of a factor 2. It is the kind of factor 2 you get if you treat a tensor as if it were a vector. Stress-energy-momentum density is a tensor, not a vector. Did you take into account that you constructed energy DENSITY, not energy? density implies a volume element, which is not Lorentz invariant. I see nowhere that the electron undergoes Lorentz contraction, and I see nowhere the effects of stress. In short, TOTAL energy and momentum in the em field, if added to the energy and momentum of the source(s), are conserved. So mass.c^2 of the electron plus energy of the field are conserved, and momentum of the electron plus momentum of the field are conserved - regardless what configuration you look at (such as paralel beams of particles).
G. 't H

From C. van der Togt September 30, 2010

Dear Professor 't Hooft,

I'm sorry but your answer is anything but satisfactory:

You say: "Your equation 6 suggests a mistake of a factor 2".
This suggests that equation 6 is false and differs a factor 2. Then there must be an error previous in the derivation of equation 6. What is the mistake that is made?

"Did you take into account that you constructed energy DENSITY, not energy?"
Yes. Apparently you did not read the article!

"I see nowhere that the electron undergoes Lorentz contraction"
In the beginning of the article there is said: "In addressing these questions, only non-relativistic velocities need be considered, because relativistic conditions unnecessarily complicate the situation without adding any additional insight."
Again this stipulates you did not read the article.

Furthermore you introduce unsubstantiated remarks like: "It is the kind of factor 2 you get if you treat a tensor as if it were a vector. Stress-energy-momentum density is a tensor, not a vector".
Show me where this mistake is made according to you!

That you do not want to discuss the article(s) serious, like all other scientists, is obvious. This attitude makes it impossible for me to stop my quest. How can I stop if no scientist in the world is able or willing to give me proper arguments on my questions.
Why not stay to the real basis of all science: emperical science. I suggested a simple really basic fundamental experiment that will end all discussions. You however did not mention a word about my proposition to perform the experiment.

You say “hundreds of thousands of totally different experiments” have been performed. Why not add this fundamental experiment, that tests the core basis of EM and QM?
A real scientist like you can have no objection because Science is the search for the truth.

Sincerely,

Carel van der Togt

From Hooft, G. t September 30, 2010

In the beginning of the article there is said: "In addressing these questions, only non-relativistic velocities need be considered, because relativistic conditions unnecessarily complicate the situation without adding any additional insight."

That’s your error, or at least one of them.
The kinetic energy is small compared to the mass-energy (a factor (v/c)^2), so “small” effects such as Lorentz contraction, which also give (v/c)^2 corrections, cannot be ignored.

You are welcome to do the experiment but I am not interested, since your starting idea is all wrong. We know that energy and momentum are conserved in all (classical or quantum) electromagnetic

phenomena, in complete agreement with the standard theories.** Please look up any advanced text book that discusses the stress-energy momentum tensor.

G. ‘t H

** Prof. 't Hooft means that experiment and theory are in agreement in the way that energy and momentum are not lost in experiment nor in the standard theories. This however is no evidence at all that the standard theories are correct. The one thing that is known of a particle with great accuracy is the **mass**. When a “theory” is developed scientists know that mass and momentum **must** be conserved. So “theories” will always be in “complete” agreement with experiment. When this is not the case a physical process will be concocted and math will “compensate” the physical violation. The outcome of the theoretical formula may be in agreement with experiment but the assumed physical process is completely false and therefore also the acquired physical insights. To be able to make **valid** physical conclusions the equations must **at least** be valid in physical sense. QM “invented” stress-energy because they “lost” 1/3 of the electromagnetic energy and forgot the magnetic spin energy!

From C. van der Togt Oktober 1, 2010

Dear Prof. 't Hooft,

In the beginning of the article “**The Equivalence of Magnetic** ...” there is said: "In addressing these questions, only non-relativistic velocities need be considered, because relativistic conditions unnecessarily complicate the situation without adding any additional insight."

You say: “*That’s your error, or at least one of them.*
The kinetic energy is small compared to the mass-energy (a factor (v/c)^2), so “small” effects such as Lorentz contraction, which also give (v/c)^2 corrections, cannot be ignored.”

Sorry but this argument has no validation at all. The relativistic energy is neglectable when velocities are very small compared to the speed of light. When Thomson's derived (1881) that the electromagnetic energy of a moving electron, he could only explain 2/3 of the kinetic energy (2/3 problem). One assumed that the missing 1/3 energy had to be contributed to an unindetified “mechanical mass”. The Lorentz contraction has nothing to do with this; there is no relevance whatsoever.

To make up for the “missing” 1/3 mass of the electron, caused by the energy conservation violation of Thomson/Feyman/QM I refer to, QM had to concoct an other explanation.

You say: “*We know that energy and momentum are conserved in all (classical or quantum) electromagnetic phenomena, in complete agreement with the standard theories.*”

When QM violated the energy conservation law and “lost” 1/3 of the mass of the electron QM “corrected” this loss by assuming there was “stress-energy” because the mass of the electron was known.

The simple truth is that QM ad hoc mathematically corrected the physical false analysis of Thomson/Feyman/QM; the physical violation was mathematically compensated but the initial physical violation was not.

You say: “*You are welcome to do the experiment but I am not interested, since your starting idea is all wrong.*”
This means the experiment can be performed at your Physics Department at the University of Utrecht?

Sincerely,

Carel van der Togt

From Hooft, G. t Oktober 1, 2010

I'm not defending Thomson, that was nearly 130 years ago. I am defending my own understanding of EM and QM
"... QM had to concoct an other explanation...." My QM has nothing to do with that. Thomson did not know about special relativity, let alone quantum field theory, where all these problems simply do not arise.
"... This means the experiment can be performed at your Physics Department at the University of Utrecht?.." Of course not.
G. 't H

From C. van der Togt Oktober 1, 2010

Dear Professor 't Hooft,

First I have to say I admire you for what you have achieved. Nothing can change that.

The problem I encountered when I discovered Thomson/Feynman/QM violation is that no one takes me serious. When at last some scientists did read the articles and discovered QM and RT are based on false premises immediately all contact was ended.

Like you say it is not your understanding of EM and QM. Your work is exceptional, but that doesn't change the fact that the premises on which QM is based are false.When you want a short summation of things that went wrong in Theoretical Physics you should read the chapter “ Incompetent Science ”.

All my efforts the last 12 years have been focused on acquiring funds for building a nuclear fusion reactor. Ether physics strongly suggest that with present technology a nuclear fusion reactor can be developed with a budget of 25 million Euro. But because all my articles were denied by main stream physics journals acquiring these funds is impossible.

Recognition by science is inevitable. So there is no other way for me then trying to convince people that QM and RT are false. When science had not unjustly rejected my articles I would not be forced to write emails to shake things up. But unfortunately scientists do their utmost best to prefent ether physics to be considered a valid alternative.

This leaves me no other way then to expose the mistakes that are made in an unsymphatetic way. When I could acquire the 25 million in an other way I would delete my book and articles from the Internet because I do not seek fame or intellectual recognition. All I want and care for is that society needs for several important reasons clean and abundant fusion energy (and I love building the reactor).

Much of what theoretical physicists achieved is briljant. I understand their resistence because when the public discovers that what was claimed by scientists to be the scientific truth is just fiction they loose face.
I have no other choice then to put our correspondence on the Internet in my website because the correspondence demonstrates that even you, a Nobel laureate, cannot find a single legitimate argument against the article and that implicates that the article is correct and QM is false.

Again my apology but I see no alternative.

Sincerely,
Carel van der Togt