

Re: Why relativists don't understand Einstein's 1905 mathematics.

Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2008-09/msg00893.html>

- *From:* John Kennaugh <JKNG@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Fri, 12 Sep 2008 17:57:11 +0100
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wrote:

On Sep 10, 9:26 pm, John Kennaugh <J...@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

<<< As far as I can see light is made up of particles which are only unusual in that they happen to travel rather fast compared to the speeds we are used to. >>>
<< Where did you ever "see" that "light is made up of particles"? [What we actually see is the slowly changing image on a curved plane, the retina of our eye(s).] >>
< Don't play semantics. >

"Defective semantics destroyed theoretical physics more surely than its equally defective mathematics." From A Flower, etc.

< Light is generated in quantized lumps [True](Planck) and arrives at its destination in those same quantized lumps [False.] (photo electric effect/Einstein) i.e. photons. >

It doesn't "arrive" there in those same lumps, it REACTS with the atoms in its destination in quanta whose value depends on the state(s) of motion of the absorber(s)!

<It cannot mutate into waves for part of the journey because by their very nature waves spread out and their energy density reduces.>

THAT is precisely what DOES happen.
How else could 1,000,000 differently moving people on x^n different planets, all see a given star at different times per system?

A beam of light will dissipate laterally, exactly like a wave system, but the individual quanta of which it to be composed do not dissipate. The unimpeachable experimental evidence for this is that the intensity of light decreases with distance from its source (the beam, becomes more widely spread out), but the energy of its individual photoelectric impacts (its colour) does not change with distance.

< The spread out energy of a wave cannot at the end gather itself back to a point to become a quantum of energy again. [A "point" is a mathematical abstraction that doesn't otherwise exist. Even so, I agree with you, on that.] The waves of Maxwell's wave in aether theory do not physically exist [in a radiating "photon"]. Light is made up of particles. >

Despite the fact that light interacts with atoms in discrete quantities of energy, it is NOT a lump of anything while radiating through Maxwell's compressible aether,

That is what the evidence says to me. No matter how faint the light, something has sufficient energy in one spot to displace an electron.

or through Lorentz's incompressible aether, or through my universally movable easily compressible continuous matter out of which all ponderable matter (atoms, etc) is made.

<<< They have momentum [= mv = mass times velocity] which is why when they hit something pressure is detectable. >>>

<< If mass is a function of v , becoming infinite when $v = c$, then how come the momentum of a photon [$mc = \text{infinity}$] isn't infinitely great? Why doesn't a photon moving at c wipe out anything it hits? >>

< This is basically saying that a photon cannot have mass because if it did a prediction of SR would be wrong. It has mass therefore SR is wrong and mass is not velocity dependent. Essentially what Einstein assumed was that EM theory is correct and that therefore the laws of mechanics had to change resulting in having to ditch 3 long standing and apparently sensible axioms of physics. The alternative is to assume that mechanics is fine and that EM theory needs to be adjusted. The only two things which need to change is firstly that light speed is source dependent – perfectly reasonable since light is made up of particles, and that the force between charges is velocity dependent. All you need assume is that c is the maximum speed at which a force can act so that the nearer to c a charged particle is traveling the less acceleration is produced. If you are accelerating a charged particle it is a function of q/m and there is no way of telling whether the factor which SR assumes multiplies m instead divides q .

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They have no need for an aether and in the absence of an aether a source in space is surrounded by nothing which can take part in a physical process so their speed must be the result of the only physical process involved, that taking place at the source. >

<< Einstein's "photon" is a quantity of energy whose numerical value is given by $e = hf$, in which e is Planck's quantum of energy, h is his quantum of action, >>

<what does that mean? >

<< and f is the frequency relative to a given object.

If we ignore the fact that this "frequency" denotes the number of WAVES that pass a given point per second, and that "a given point" is an abstraction – a point at rest in a given FoR – then a photon (or ANY wave system) moving at c IS a physical process. Since it is impossible for such a physical process to take place in an empty nothing, a material medium is obviously present wherever light goes, which is everywhere in the universe. >>

< I accept that that would be true if light was indeed a wave. It isn't. If it were it could not possibly knock electrons out of a metal unless the intensity was sufficient to make the metal hot enough to release thermal electrons. Once you accept that light is particles and that the waves do not physically exist then you have no need for a medium. Instead you need to concentrate on trying to explain how photons can produce such a convincing facsimile of a wave. Something seriously neglected by physics. I believe that Waldron is on the right lines >

<<< [1] Relativity is based upon the assumption that Maxwell's theory is impeccable. [2] The waves of Maxwell do not physically exist. [3] The aether in which they were thought to be waves does not exist. [4] The independent fields which were believed to map altered states in the aether do not exist because there is no aether for them to exist in. [5] EM theory is no longer a legitimate branch of physics and neither therefore is relativity. >>>

<< My comments:
1 is false. >>

< "Albert Einstein was one of the few people who realized explicitly that his theory rests on the *assumption* that our present Maxwell–Lorentz electrodynamic theory, experimentally verified only for [any] velocities of charged matter, will also hold for velocities commensurate with the velocity of light. Considering that our present [Maxwell–Lorentz] theory electrodynamics have grown out of a concept of an elastic ether, whose existence is now disproved beyond reasonable doubt [Not so!!]

I agree but it is in the quote

and that the Maxwell equations do not satisfy the principle of relativity in its simple form using the Galilei transformations [rather than the Lorentz ones], this assumption is far from self evident." Beckman and Mandics 1965. Introduction justifying the need for their experiment. >

<< 1 is false. STR is based on two postulates, the second of which (together with his third postulate – that clocks of all systems, moving or not, must be set to MEASURE the speed of light as a constant, $c = 1$ unit per second) is "Any ray of light moves in the 'stationary' (i.e. MOVING) system with the *_DETERMINED_* velocity c , whether the ray be emitted by a stationary or by a moving body."

<Maxwell's theory may be summarized as follows:

- 1/ Everywhere including space is filled with the aether.
- 2/ A charge will cause a 'stress' in the aether.
- 3/ A field is the pattern of 'stress' in the aether.
- 4/ The force between charges is a result of the interaction of their stress patterns in the ["elastic" spaces between his particles of] aether.
- 5/ The stress can propagate in the aether at speed c in the form of electromagnetic waves an example of which is light.

Two predictions of the theory were:

Prediction 1 – Because the speed is controlled by the aether, the speed of light [in the aether] is independent of the speed of the source.

Prediction 2 – Because the speed is controlled by the aether, the speed of an observer relative to the aether will add to or subtract from the speed of light in the aether.

<<< The MMX was a different method trying to show the truth of prediction 2. [Agreed.] I said that Relativity is based upon the assumption that Maxwell's theory is impeccable. It is also based on the assumption that the MMX had sound methodology. On that dual basis it *appears* from the MMX that every observer is stationary w.r.t the aether. The second postulate simply describes what an observer would observe if he was, or *appeared to be* stationary w.r.t the aether. It also assumes the validity of prediction 1 of Maxwell's theory. It totally ignored the fact that Maxwell's waves do not physically exist.

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<< The light-waves of Maxwell DO physically exist. If they didn't, the f in $e = hf$ would be meaningless, thus so could Planck's quantum of energy. >>

< As I have pointed out the light waves of Maxwell totally fail to explain the photoelectric effect. The [quanta of action] which Planck showed light is generated in was shown by Einstein to arrive at their destination unaltered. >

Not true. Planck was right and E was wrong. The value of f is a function of the state of motion of the absorber.

< At what point do they become waves? >

Immediately AFTER e_o is emitted.

<OTOH If a photon has mass and spins as suggested by Waldron then it has a frequency (number of revolutions per sec) and rotational energy proportional to frequency. >

How can the number of revolutions per second depend on the linear velocity relative to the state of motion of a viewer?

Very easily as far as I can see. Unless I have misunderstood your point.

Even if it did,
what does that have to do with the INTERNAL structure of a radiating beam of light?

Don't understand the question. If you have Waldron's photons which contain mass and charge and rotate together and move at c you have something which has frequency wavelength moving at c . Charges in say an aerial will be caused to move in sympathy affected by the field of influence of the moving charges. An interference minimum occurs when a beam of photons spinning out of phase have an equal an opposite effect.

< According to Waldron a photon has rotational energy $m.c.c/2$ and kinetic energy $m.v.v/2$. In the FoR of the source $v = c$ so the energy becomes $m.c^2 = hf$. >

How can a photon have a mass m during transmission if, as physics says, a photon has zero mass?

Relativity says nothing with mass can travel at c . A photon is affected by gravity and has momentum therefore has mass and travels at c . A prediction of SR is wrong so SR is disproved by experiment.... but SR can't be

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wrong so physics redefines mass.

<<3 is true, the [universally stationary] aether in which they were thought to be waves does not exist. BUT a compressible wave-conducting material DOES exist everywhere, including the "elastic spaces" between Maxwell's infinitesimally small "particles" of "aether". >>

< You are stating your personal belief. What basis have you in view of the experimental evidence provided by the photoelectric effect that light waves exist or that they need a medium to be light waves in. >

See discussion below, re that effect.

<<< 4, though more true than false, is ambiguous. It is true that the "independent fields which were believed to map altered states in [Maxwell's particulate] aether do not exist because there is no [such discontinuous] aether for them to exist in." In no way, though, does that mean that Maxwell's electric and magnetic fields don't exist in the continuous matter that fills all space, including the spaces inside of and between any particles made of it.

5 is also ambiguous. Independently of the fact that EM theory IS a legitimate branch of physics, and independently of the fact that many of its equations are correct, STR is a false and misleading theory, thus is NOT a legitimate branch of physics.>>>

<< Physics was not forced to abandon reason; it chose to because it could not bear to ditch Maxwell's wave in ether theory, and refused to accept that it had been wrong for a couple of centuries in that that Newton's corpuscular theory was in fact correct as least in its basic concept. >>>

<< Right thesis, but for the wrong reason.

Having accepted the Lorentz equations (which disagree with Newton's basic theory) our physicists abandoned reason because they also accepted Einstein's theory, even though none of them understood the physical – nor, therefore the mathematical – meanings of those equations, nor, therefore, that the equations contradict the very theory they accepted as true. >>

<<<< The absurd wave-particle duality fudge prevented a great chunk of dodgy physics from being rightly scrapped and rebuilt on sound lines. [True.] By adopting it, physics avoided the great question as to what the structure of a photon needs to be in order for photons to so convincingly mimic waves. It is in my view the single most important question in Physics and yet current doctrine says that a photon has no internal structure. >>>>

<<< A "frequency" demands and is based on a wave system as part of the internal structure of a quantum of energy >>>

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<< anything which oscillates or rotates has frequency. >>

<< A "frequency" demands and is based on a wave system as part of the internal structure of a quantum of energy: $e_o = (2\pi r m_e c) f$. >>

< You will have to explain what you mean. This statement means nothing to me >

As written in "A Flower for Einstein" (in which that equation IS the "flower",
Requiem for my True Hero

With sadness and compassion
I now lay upon his grave a flower:
The Grail he so avidly sought.
I give it to him as his own invention.

$h = 2\pi r m_e c$
In that equation, m is the mass of an electron; $2\pi r$ is the length of its orbit in a hydrogen atom of radius r ;
 $c = c F_s = c/137.0609$ is its orbital speed therein; c is the speed of light in vacuo, and F_s is the Fine structure constant.

For those in Physics who think that a theory is nothing but an equation; that is sufficient unto itself. Since, to me, without the underlying metaphysics a naked equation is merely a decorative bauble; the gift is just a small token of appreciation. Had Einstein seen the flower, the moment he understood its message he would have instantly canceled his theory that the quantum of energy (which he called a photon) is a particle that remains unchanged during emission, transmission, and absorption.

I am still waiting for you to make some point.

<<Since no such electron could be part of a light-wave moving at c ,

<I never mentioned electrons >

But you did mention the photoelectric effect. In case you misunderstood what it is, here is an explanation from an internet page: "The photoelectric effect refers to the emission, or ejection, of electrons from the surface of, generally, a metal in response to incident light."

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I was aware of that and that there is a critical energy of photon (colour) for a particular metal such that below that energy no electrons are ejected – no matter how bright the light and above which electrons are emitted no matter how dim the light and that further the emission of electrons starts immediately so that it is not a case of the atom gradually absorbing energy until it has accumulated enough energy to eject an electron. The critical energy (colour) is just sufficient to dislodge an electron, above that energy (bluer) the excess energy appears as kinetic energy in the emitted electron. Analogy – if you fire ping pong balls at constant speed at a coconut in a coconut shy it doesn't matter what your rate of fire is you will never knock off the coconut. If you keep the speed constant and increase the mass of the ball you will reach the point where the ball has just enough energy to topple the coconut. A heavier ball at the same speed will send the coconut flying.

The page continued, "Einstein (1905) successfully resolved this paradox by proposing that the incident light consisted of individual quanta, called photons, that interacted with the electrons in the metal like discrete particles, rather than as continuous waves."

<< Since no such electron could be part of a light-wave moving at c ,

no one said it was!

a

"photon" is NOT the e_0 that radiates through the luminiferous material that fills space,

That statement does not follow from the first.

it is only the quantity that emits or is absorbed. It is therefore true that Einstein's photon has no structure while radiating through space; because something that DOESN'T EXIST during that interval HAS no structure.

You state a belief which has no basis in experiment. If light is a linear function i.e. a propagated wave then the energy density per square meter of wave front falls by the square of the distance. Far enough away from the source the energy necessary to displace an electron from a metal will be spread out in an area of say 1sq m or 10 or 100. It matters not. How do you propose to get that energy to a single point so that it can displace a single electron from the metal? I always prefer the simple explanation that the light is getting dimmer because the particles of light are getting further apart but individually they are unchanged which is why when one hits the coconut you get a prize.

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< You will have to try and explain that in simple terms. >

Since the words of present physics are based on their defective theories, that is impossible.

They say "dark matter", and "dark energy", and "particles of energy", and "mass, in grams", and "subatomic particles" where I say "continuous matter", and "basic pressure, that exists where matter is; which is everywhere", and "quanta of energy", and "mass denotes a quantity of matter, measured in densa", and "subatomic nodes, which are wavicles, not 'particles'".

They think that a gravitational force exists in the empty space between basic particles. I know that a "gravitational field" is a density gradient permeating the material that fills space;

"I know"!!! – did god tell you or should you have said "I believe that...", or "I propose that..." or "my hypothesis is that..."

It seems to me that you are simply ignoring some basic facts.

and that a gravitational force is a net pressure that arises INSIDE of every atom embedded in, thus becoming part of, that field.

They think an electric current is a flow of electrons, and that an electron is a particle of negative electricity; i.e. that electricity is a flow of negative electricity. I think electricity is a flow of a pressure and density gradient, grad sd, and an electron is an sd node circulating in an atom's shell-layer.

Nuff said, John, because I've already begun to use my own language; which is known only to those who've read my many books.

As I said:

<< Having "abandoned reason" current doctrine doesn't even know what reality_"whateverTHATmeans" IS! >>

Nor, therefore, would they know the meanings of the words that can and do describe it.

glird

—
John Kennaugh