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# A New Form of Light? No.

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Scientists at MIT reported yesterday that they had discovered a new form of light. They sent a very weak laserbeam through ultracold Rubidium, and claimed to discover photons with mass coming out the other side moving only 3km/s. That's .00001c. Here is how they explain that:

As a single photon moves through the cloud of rubidium atoms, it briefly lands on a nearby atom before skipping to another atom, like a bee flitting between flowers, until it reaches the other end. If another photon is simultaneously traveling through the cloud, it can also spend some time on a rubidium atom, forming a polariton – a hybrid that is part photon, part atom. Then two polaritons can interact with each other via their atomic component. At the edge of the cloud, the atoms remain where they are, while the photons exit, still bound together. The researchers found that this same phenomenon can occur with three photons, forming an even stronger bond than the interactions between two photons.

If you like that explanation, you may also like to know that—as with LIE-GO—this research and theory was funded by the National Science Foundation, with your taxdollars. And if you *don't* like it, well, tough, because they are going to tax you for it anyway.

We know we are in the presence of some really top-notch theory when we are told that polaritons are a hybrid, part photon, part atom. Also good to know that photons can move like bees flitting between flowers, and that they can "briefly land" on an atom. Likewise that photons can interact via their "atomic component". Brilliant stuff: I just wish I could personally nominate it for a Nobel Prize in quasi-physics.

But seriously, it is obvious these particles exiting the experiment aren't photons, so I don't know why anyone would theorize or report that they are. If they have gained mass, lost most of their velocity, and are huddling, they can't be photons. They are *former* photons that have been spun up into some sort of lepton. Without more information—such as a measured mass and phase shift—it is hard for me to say more, but best guess is they just have non-spinning electrons here. They are used to dealing with spinning electrons, which have 9 times the mass/energy of non-spinning electrons, so they don't know what they are seeing. But my quantum spin equation predicted this outcome years ago. 8/9ths of the mass/energy of the standard-issue spinning electron is in its z-spin, as I show in those simple equations. So if the electron isn't spinning, it seems to lose most of its mass, registering only $1/9^{th}$ its normal mass.

The electrons exiting this experiment aren't spinning due to the ultracold. Ultracold just means the

ambient charge field is very weak, with very few charge photons flying around. Most of them are gone, since heat=charge. The colder it is, the less charge density you have. Well, it is charge that spins up electrons and everything else, so if you have less charge, you have less spin. *Everything* loses spin when it is ultracold, for this reason.

This also explains why the electrons are able to huddle. Without any spin, they have no way to repel one another. Real spin is how these tiny particles repel one another. That, and with recycled charge. Remember, everything above the size of the photon recycles photons, including the tiny electron. The electron recycles only about 1/1821 the charge of the proton, but it still recycles. The photons go in the poles of the electrons and come out the equator, just as with the proton, the nucleus, the Earth, the Sun, and the Galaxy. But when the charge density drops due to cold, this charge recycling also fails. Very few photons are recycled, so very few photons are being emitted at the electron equator. Without that force of repulsion and little or no spin, the electrons cannot exclude eachother. They huddle.

I have used that mechanism to explain other mysterious phenomena in several previous papers, including the make-up of various mesons. For instance, in that meson paper I show the tau neutrino is not a neutrino at all. It is four x-spinning leptons huddling. **And the muon neutrino is actually three non-spinning electrons huddling.** That's right: I have already predicted and explained these three huddling photons they are claiming to find at MIT. But they aren't photons. I predict this 3-particle they saw will turn out to be the same as what they have heretofore called a muon neutrino. I bet you this 3-particle they have found will turn out to have an energy of 170 keV. They will then revise their theory, claiming to have found muon neutrinos exiting the experiment. But I have just shown you that is also wrong. What they have is three non-spinning electrons. The energy of the normal spinning electron is .51 MeV. Divide that by 9 to indicate the missing spin, which leaves us with 56.78 keV. Multiply by 3, to get 170 keV.

You will say, "If the ultracold is stopping spins, how can photons be spun up?" They are being spun up because the laser is being aimed at the Rubidium on purpose. So a collision with the nucleus is being forced by the machinery. It isn't the charge field spinning up the photons, it is the forced collision with the nucleus. But once the photons are spun up into leptons, these newly created leptons can't maintain their equatorial spin. Why? Because to maintain that spin requires charge recycling through the particle. The charge density doesn't allow for that, so the new lepton is torpid. It has the spin level, but very few photons are moving through. "Then why doesn't that spin level shed, the lepton dissolving back down to the photon?" Because that isn't the way it works. Spin levels don't spontaneously shed after they have been created. They have to be actively stripped by a hit.

Which forces me to drop the simplification above and explain this with a bit more rigor. When I say "non-spinning electron" above, what I really mean is **an electron whose outer spin level is not energized by the charge field**. In previous papers I have defined these spin levels as energy levels. It was known energies that allowed me to calculate the spin levels in the first place. So, as a matter of energy, a non-energized spin-level was as good as no spin level at all. If no charge is moving through the spin level, then that spin-level doesn't contribute to the mass/energy of the particle. So, as a matter of theoretical convenience, it is quicker to call an electron of that sort a non-spinnning electron, you see. This quickly differentiates it from the normal electron which does have a charged outer spin, which I have previously called a spinning electron. It is spinning about an axis, or a-level.

But if we want to get picky, even the "non-spinning" electron is spinning. Like all other leptons, it is a stack of spins, and it has the same z-spin as a spinning electron, and therefore the same radius. But since the z-spin has very few photons moving through it, it is not properly charged. It therefore can't

maintain its normal energy level, falling down to $1/9^{th}$.

The next question is, “If that is so, then why does the particle have any energy at all? If the z-spin is defined by the photons moving through it, then the inner spins must be defined in the same way. But if the charge density has fallen so much, how does the lepton maintain any energy at all? Why don't all particles larger than the photon simply collapse and dissolve at absolute zero?”

Well, I assume the answer to that is that they would, if the temperature actually went to absolute zero. But to get to absolute zero in that sense you would have to create a *complete* photon vacuum. There is no such place in the universe, much less in a lab here on Earth. Even in the space between galaxies, the photon density is not zero. And inside galaxies, the photon density is quite high. Near a star, as we are, it is even higher, and on the surface of a planet it is higher still. So what we are calling absolute zero is actually well above it. It is the minimum temperature here, but nowhere near the possible minimum temperature. All of which goes to say that the photon densities in this experiment may have been quite low, but they were nowhere near zero. So there should be no question of leptons collapsing. The z-spins of these created leptons appear to be quite low in charge, as we have seen, but it would require far lower temperatures to start the spontaneous dissolution of leptons into photons.

For this reason, what I said above is true: Once a particle like a lepton is created by being spun up, it cannot spontaneously dissolve. It can only revert to a photon by having its z-spin actively stripped, and that stripping requires a real edge hit.

In conclusion, I have once again shown that we must be strict in differentiating leptons and photons. I have tried to ram that finding home in previous papers, and I ram it again here. Particles that have slowed below c and gained mass cannot be photons. *By definition*, they must be some species of lepton. Yes, they *used to be* photons, but once they have been spun up, they no longer are.

We could change the name of lepton to something else, if we don't like that name. But conflating leptons and photons is not a good idea at this point in history. It would only cause more confusion. In short, **if it is going c, it is a photon. If it isn't, it isn't a photon.**