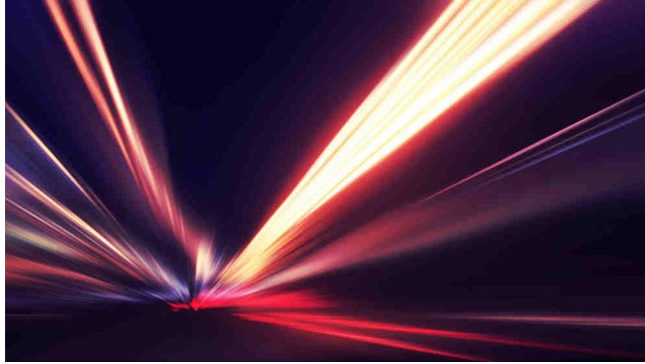


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PHOTONS SLOWED BELOW c ?

Not Really



by Miles Mathis

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My best readers may remember that [I emailed Miles Padgett a couple of years ago](#), getting the expected no response. Who is Miles Padgett? He is a physics professor at the University of Glasgow, Scotland. He is a specialist in light theory and also an experimenter. The results of his latest experiment were just published in the journal *Science Express* and [reported by the BBC](#) on January 22. This is going to be a very short paper, because I am actually *not* going to question the results at all. Only the interpretation of the results.

I have no trouble believing they put photons through a mask, and that the photons were changed so that they no longer kept up with other photons. That is, I *believe* the particles coming out the other side were slowed below c . However, they were no longer photons, so photons were not being slowed below c . See the difference?

What was happening is that the photons were being spun up by the mask. If they were spun up enough, they became a species of *electron*. That's right. In my theory, an electron is just a spun-up photon. You can see the [quantum spin equation that shows the particle hierarchy here](#). In the same way, a proton is a spun-up electron. So the particles coming out the far end of Dr. Padgett's mask are not strictly photons. They are level-1 spin electrons.

This is actually how Nature creates electrons. Something similar to what is happening with the mask here is happening in the galactic core and maybe in stars as well, where photons are spun up into electrons. With the right mask (high enough energy), these guys could spin the electrons into protons. In fact, that is basically what they are doing in LHC: they are spinning protons up into far larger particles which they are choosing to call bosons. See [my papers on the Higgs](#) for more on that.

So this problem is all one of definitions. The old particle definitions aren't tight enough, so that we

seem to be getting photons not acting like photons should. But if we tighten up the definitions, we don't get the mysterious outcomes anymore. We shouldn't call any particle that moves below c a photon, because *by definition* a photon moves at c . And it moves at c for a clear physical reason: it has a small enough spin radius to dodge the ambient charge field and move at the maximum speed c . The particles coming out the other side of the mask aren't photons because they have a larger spin radius and can no longer dodge the ambient charge field. As soon as they reach a spin radius that slows them below c , we should begin calling them electrons. They are level-1 electrons, and we are used to dealing with level-2 or 3 electrons, but strictly they are still electrons.

Now, at some point we may wish to create separate names for all these particles. We may wish to call level-1 electrons levelons, or something. And level-2 electrons levedues, and level-3 electrons levetres, and so on. But for now, the important thing is to separate the photons from the electrons, and the separation point is obviously c . Particles that are going c are photons. Particles that have slowed below c have done so because they have achieved a spin radius that *forces* them to slow, and therefore they are no longer photons. Therefore, it is inaccurate and misleading to say that photons have been slowed below c .

Some will say, "Well, according to you it is the same particle, so why not report it that way?" Because if we do that, then we have to just call *all* particles photons. We would have to start calling all electrons photons, all mesons photons, all protons photons, all bosons photons, etc. We would have no way to differentiate one particle from another, which isn't a useful method of naming. It obviously makes more sense to keep the photon/electron delineation we have, but tighten it up. This reportage from the BBC and Padgett just adds to the blurring, and we don't need that. You don't correct imprecision in naming by loosening the definitions, you correct it by tightening. You create more names, not fewer.

So it doesn't finally matter that all these particles are spun up from the photon. I mean, it matters as theory, but it doesn't matter as naming. We need lots of names to help us categorize the interactions, actually the more the better. That way we don't confuse one particle with another.

Everything in the universe is ultimately composed of photons, but it wouldn't help us to call everything "photon." As a matter of science it doesn't help us to say, "Hi, I am photon, I would like you to meet photon, son of photon. He lives on planet photon in the town of photon on photon street." Names create separations, and these separations help us understand differences. So it is important that we tighten this boundary between photon and electron, study it, and understand exactly what causes it. The loose interpretations of the new experiments are not helping us do that.

Nor are the exclamatory headlines, which tell us that [these experiments "defy science."](#) or break the rules, or shatter the boundaries. To start with, you cannot defy science, except by being unscientific—which these articles and interpretations unfortunately are. Good experiments and good interpretations can only *extend* science. The new experiments aren't breaking any rules or shattering any boundaries: Nature follows her own rules and sets her own boundaries. The experiments are simply showing that the old definitions were very poor. When these photons are spun up into electrons, Nature isn't breaking any rule, she is just showing us how little *we have understood* of her rules up to now.

In this way, the peleton interpretation also fails. In the article at the BBC, the wave front is sold to you as being like a bicycle peleton, as in the Tour de France. The peleton is going speed x , but not all riders are going exactly x . In this way, you are to understand c as some sort of average. The mask then filters out the slower riders.



But that isn't what is happening. Rigorously, it is the *wrong* answer, because *c* isn't an average. They know this from other experiments, but you aren't told that. As just one example, [NASA reported](#) in 2012 that no delay had been discovered in light of different energies arriving from vast distances. In other words, there were *no slow riders* in the peleton. So the mask can't be filtering the slow riders.

In fact, the BBC article contradicts itself. It tries to explain the mask effect with the peleton example, but then right after that it quotes Padgett saying,

What makes our experiment different, and what has brought clarity to this, is that rather than looking at a light pulse which contains many, many, many photons we've reduced the experiment down to a single photon.

Do you see the contradiction? There is no peleton! If they have reduced the experiment down to a single photon, they can't claim any analogy to a peleton, can they?

Again, what is happening is that the mask is either spinning up all photons—but only the most energetic are spun up into level-1 electrons; or the mask is selectively spinning up the highest energy photons into electrons and leaving the others unchanged.

We have seen this same problem in many recent experiments, where physicists can't seem to differentiate electrons and photons anymore. Sometimes they think photons are becoming “electron-like”, and sometimes the reverse, but their old definitions and assumptions don't allow them to make sense of the newest outcomes. My theory allows us to make sense of all the new experiments—and all the old mysterious experiments (think [superposition](#) and [entanglement](#))—simply and directly.

I think you can see that Miles Padgett should have responded to my offer for assistance. Although he appears to think he can get along without it, we see that he and his colleagues aren't doing so well. I could say the same for all of mainstream physics, and I *will* say it. I have said it. It has been said.

An another example, we see their confusion in the BBC article, where Padgett is quoted saying that it is “the pattern” that causes the effect in the mask. When the author asks the very pertinent question of how you can impose a pattern on a particle, and how that pattern would slow it, we get this old dodge:

It's because photons exist in the exotic and rather wonderful quantum realm, where the rules of the reassuringly solid world in which we live tend to lose their grip. They exhibit what physicists call “wave-

particle duality": they behave like both a wave and a particle. So you can send them round a racetrack two by two like particles, yet change the shape of one of them as if it was a wave.

That isn't quoted to Padgett, but it might as well be. He has allowed himself to be ensnared in this old net. If Padgett understood as much about light as he thinks he does, he would have never allowed the author that dodge. He would have stepped in and given a sensible answer. Instead, he allows and even promotes this nonsense about patterns causing velocity drops.

It isn't patterns, wave-particle dualities, or any other quantum mystification causing this velocity drop. **It is spin mechanics in a real ambient field.**

Mainstream physics, which should be demystifying the universe, is actually manufacturing mysteries. Rather than solving problems, it is compounding old problems with bad thinking and crass salesmanship. And it is doing this—many or most times—*on purpose*.

If you are a doctor who wants maximum profit, do you cure as many diseases as you can, or manufacture more? If you are a psychologist who wants maximum profit, do you cure as many neuroses as you can, or create more? If you deal in pharmaceuticals and you want maximum profit, do you promote fewer ailments, or more? If you are a physicist interested in maximum funding, do you solve problems or create more? Consider it for a while and I think you will eventually come to this conclusion: fake enterprises always cost more than real ones. Although you are taught the opposite from the time you are in kneepants, the rule, unfortunately, is this: the more expensive the thing is, the more likely it is to be fake. The most reality is always hiding near the free end of the spectrum.