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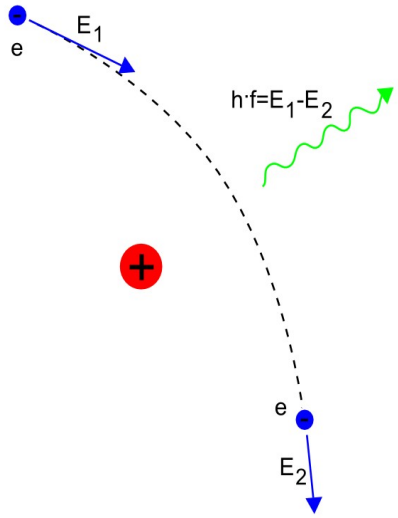
BREMSSTRAHLUNG RADIATION
a better mechanism



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First posted April 21, 2011

This is a strange one. If you do a websearch on Bremsstrahlung [German for "braking radiation"], you get a large amount of misdirection. Wikipedia, for example, tells you nothing of the history of it, who discovered it, who made up the term, and so on. You also find nothing of the mechanism of Bremsstrahlung. As usual, you are given only the results and some math made up to match the results. But no history and no theory. We have come to expect no theory, but we usually see the heroes of the mainstream mentioned, in a history-bite at least. Here, nothing.

From web sources, you only find that Bremsstrahlung is photons emitted by electrons when they are slowed by near contact with atoms or free protons. But no one ever bothers to tell you how electrons can emit photons. Are electrons little lightbulbs? Are they glass balls full of photons? When an electron emits a big photon, like an X-ray, is the electron diminished by that amount? Don't ask the standard model. Apparently they don't know or don't care.

Same problem if you ask how electrons can be slowed. If they are point particles or, worse, probabilities, how do they feel a slowing force? We are told they don't collide, they only suffer near passes. But if that is so, how is the slowing force transmitted? I thought we were done with force at a distance.

This is where the flunkies all scream at me, "electrons aren't little tennisballs, you idiot! Learn the

wave function and get back to us when you have a clue." But notice how convenient it is for them that quantum mechanics has no mechanics. Although they claim to be physicists, the fact that QM and QED are not mechanical allows them to dodge all physical questions. According to them, you aren't allowed to have a natural curiosity, and you aren't allowed to ask sensible and logical questions of them and their theories. No, you are supposed to "shut up and calculate." Memorize what you are taught and then parrot it back to your masters, with a bow and a scrape.

As far as I can tell, the history of Bremsstrahlung is suppressed because it is an embarrassment to the mainstream. Nikola Tesla, who was an outcast of the mainstream for decades, and still is in many ways, was the one who discovered it. Although astronomy.fm still cites Tesla as the discoverer, Wikipedia no longer does. I discovered that Wikipedia recently did cite Tesla, but took down the citation, which tends to support my reading of all this. Maybe some of Edison's descendents are policing Wikipedia, but more likely is that the mainstream simply doesn't like to cite non-tenured engineers, especially engineers who knew more about the charge field in 1880 than they know now. And Grote Reber, an even greater outcast, is the one who discovered Bremsstrahlung as the source of cosmic radio emission, although he prefered to call it free-free radiation. Reber is the ultimate outcast because he was an amateur radio astronomer who beat all the professional radio astronomers to the punch. Rather than thank him for pointing them in the right direction, they have preferred to belittle and ignore him, even after he was proven to be right and they were proven to be wrong (about cosmic radio waves). The term free-free is also still used, but Reber is rarely cited. We can only suppose this is because Reber was a proponent of tired light to the end. The professionals look for any reason to deprive outsiders of their due. Reber should be feted as one of the grandfathers of radio astronomy; instead, the only people who mention him now are on the fringe. I am sure there is pressure behind the scenes to remove Reber's page from Wiki altogether, as a postmortem punishment for not bowing down before their graven images.

As for theory, there is none. Neither Tesla nor Reber nor any of those in between were theorists, so the raw "mechanism" is all we get to this day. The electron emits a photon. But we have no clue as to how or why. If the electron doesn't actually bump the proton, how does it know to emit anything? And if the electron is a point particle, with no real spin, how is energy transfered? How does the photon germinate in the electron, and how is it launched? How can it have more velocity than the electron that emitted it? How does the electron know what energy photon to emit?

These questions may seem too esoteric for physics, but using my new theory of spins, we will find that there are possible answers to them. What is more, the answers are fairly simple.

A couple of my readers have seen this problem coming. They have asked me, "If your protons and electrons are emitting photons all the time, recycling the charge field, then how can they emit photons in instances like this? How could this Bremsstrahlung photon stand out? And what about the energies? Your charge photons are not that much smaller than normal photons. In fact, you have said that charge photons are no different than other photons, charge being only a median or average or something. How does that work?"

What we will see is that the mechanism of Bremsstrahlung, though roughly correct, is not completely correct. The electron is not emitting a photon, *it is becoming a photon*. And this new photon stands out because we have machines set up to track it. That is what these experiments are all about. We have learned where to look and how to look for such photons. We have not learned how to look or where to look for charge photons, since no one has gotten around to seeking them. Generally, you don't find something you aren't looking for.

For example, we know that photons are zipping around all the time. Even without calling them charge photons, we know that every lab everywhere on Earth is stiff with ambient E/M radiation: visible light, radio waves, infrared, the full spectrum. When I am asked how photons emitted in any experiments stand out from my charge field, I return the question: how do photons emitted in any experiments stand out from the known spectrum? They stand out because we are looking for photons of a particular sort in a particular place at a particular time, and we make an attempt to mask the area of other photons of that sort. Well, the exact same answer applies to the charge field. We don't see it with our instruments because we aren't looking for it. In fact, my charge field and this ambient E/M field *are the same thing*. The ambient spectrum IS the charge field. Physics has long know of this field, it just hasn't cared to ask or measure what it is doing, to calculate what it is really capable of.

But back to Bremsstrahlung. Ask yourself this, In all the experiments that record Bremsstrahlung radiation, are the electrons being monitored at the end? In other words, are we quite sure that we have as many electrons coming out as we had going in? No, we know we have a lot of electrons coming out, but we haven't cared to monitor how many. It never occurred to anyone to check. But we already know that all the electrons going in aren't "emitting" Bremsstrahlung radiation, otherwise we would have a lot more radiation than we see. Only the electrons that we think are making the closest passes to the atoms or protons are emitting. This is just to say that I could be right and no one would know it. It is best to show an open door before you walk through it.

My theory has a logical and straightforward explanation for Bremsstrahlung, in that instead of electrons emitting photons for reasons unknown and by mechanisms unknown, I now have electrons emitting photons via easily visualizable means. Instead of an electron and a proton in a void or free space, I have an electron and a proton in a sea of charge photons, and both big particles are recycling this charge via spin. In other words, the spinning spheres are taking in the tiny particles at the poles and spitting them out at their equators. This mechanism works on the same basic principle as an exhaust fan, pulling particles from areas of high pressure to areas of low pressure. You could also explain it as a matter of entropy or statistics. All you need are density variations. But I will not repeat all that here. The important thing is that we now have real spin and real density variations to work with, instead of charge as positive and negative signs or as virtual forces. Yes, the photons as well as the electrons and protons are all spinning, with real angular momenta. With this set-up I have explained many things, and it will allow me to propose a simple explanation here as well. In a free-free meeting of electron and proton, we need to propose that the two particles are spinning in opposite directions. It will not work if the electron and proton happen to be spinning in the same direction. But if they have opposite spins, then their charge fields will also have opposite spins. This helps us explain how particles that only suffer a near approach can feel a real force. Their charge fields are extensions of themselves, and they must feel what their charge field feels.

Nor is this a non-mechanical "field" statement, since I can expand on it if you push me. Since the particles are recyling the field around them, any change in that field will change the particle itself. If the electron's immediate charge field is forced to switch spin, via straight collisions of photons, the electron will also. The incoming charge wouldn't be able to maintain the spin on the electron, and the first thing that would happen is that the outer spin of the electron would be "stripped." This is because the spin maintains the charge and the charge maintains the spin, so that if the spins on the photons are stripped, the spin on the electron will be damped and then lost.

This means that the electron is not "braking" in a linear sense. It is *not* slowing down. It is losing energy, yes, but it is losing angular energy by losing its spin. The spin is what is braking. And the

closer the electron comes to the proton, the more spins it loses. If it loses enough spins, it is no longer really an electron. By my spin equation, an electron that loses more than two spin levels actually becomes a photon. That is simply what we call a particle with that number of spins. The electron doesn't *contain* the photon, like our glass jar with photons inside. An electron simply IS a photon with extra spins. We call a photon with two extra spins an electron, and a photon with six extra spins is a proton or neutron.

You will, "By this theory, free electrons and protons should be going c. But we know they aren't." No, my theory never says or implies that all free particles must be going c. They travel at a speed determined by their total angular momentum. For reasons beyond the scope of this paper, particles with angular momentum above a given limit can't go c, since the spin speed begins to conflict with the linear speed. The particle is too big, as a matter of spin radius, to dodge the charge field, and collisions with charge photons begin to slow it.

So, in the free-free interaction, the electron is not slowing down, as a linear matter, *it is speeding up*. It is going from somewhere below c to c, and it is doing this by shedding outer spins. It is the shedding of outer spins, and thus the new smaller radius, that allows it to attain the velocity c. In a word, it becomes small enough to dodge a great deal of the charge field. A particle that can dodge the charge field in this manner is by definition a photon, since it is this dodging that allows it to go c. The photon field is interpenetrable to itself to a large degree, and it is precisely this degree of interpenetrability that determines c, you understand.

As I hope you can intuit, the math of Bremsstrahlung will not be affected by my change in theory. Reber put it this way:

> The chances of a close encounter with considerable loss of energy is small. Conversely, the chance of a distant encounter with trivial loss of energy is large. Thus, the spectral distribution will have an inverse intensity-frequency relation. Such is the observed case.

Well, this will apply to my particles recyling a charge field as well, since the odds of close encounter will be the same either way. My theory only gives us a way to explain the transmission of the force. Without a real charge field, either Reber or the mainstream must propose a force at a distance (or, worse, a virtual force).

Now, my mechanism here implies that we should find a sort of anti-Bremsstrahlung if we fire free electrons into anti-matter instead of matter. In that case, the electron would gain energy instead of lose it. It might be given a y-spin on top of its a and x spins, in which case it would be a meson. In fact, this may be the mechanism for muon production in the ionosphere. This would also work with a positron and matter, of course. Currently it is assumed that muons are created by cosmic rays, and this may indeed be one source. But I suggest that anti-Bremsstrahlung may be another.

Given all this, I will be asked, "What about inverse Bremsstrahlung? You have what you call anti-Bremsstrahlung here, and in your next paper you have reverse Bremsstrahlung. But we already have *inverse* Bremsstrahlung, as where a plasma is heated by a laser when the electrons absorb photons. I suppose you want to deny that, too?" Well, I don't wish to deny it, but I do wish to fine-tune the mechanism. I have shown that electrons don't emit or absorb photons in this manner. The electron is already recycling a huge number of photons, so it cannot gain appreciable energy by the interaction with one photon, even if it is of high-energy. What we have is the outer spin of the electron being accelerated by the spins of the photons in question, and, in the case of inverse Bremsstrahlung, we get an electron with a higher frequency. But in some cases, this inverse Bremsstrahlung will become anti-

Bremsstrahlung, since the electron will gain enough momentum to add an entire new spin on top of its existing spins, becoming a muon. Hopefully you can see that my anti-Bremsstrahlung is just a more energetic case of inverse Bremsstrahlung.

And there is one other thing to point out with inverse Bremsstrahlung. These physicists must be using lasers made of photons rather than anti-photons. Since light here on Earth is spun by our local field, and since our local field is strongly imbalanced toward matter and photons rather than antimatter and anti-photons, this is not really a surprise, but it is worth mentioning under these circumstances. It is worth mentioning because it could be otherwise. If we were doing our physics on the Moon or Venus or Mars, for instance, we could more easily choose whether we wanted our lasers to be photons or anti-photons, since the ambient field would be nearer balanced and would not (necessarily) be making the decision for us. If we chose to bombard our plasma with anti-photonic lasers, we would then see the plasma cooling instead of heating.

And this leads us into the problem of tired light. Although Reber got a lot of things right, he was still getting some important things wrong to the end, as we will see in the next paper. There I will analyze both the tired light theory and the theory of cosmic expansion. As usual, I will show you some things you haven't seen before. And also as usual, I will pick or create a third side. I will show that both the tired light theory and the expansion theory are wrong.
