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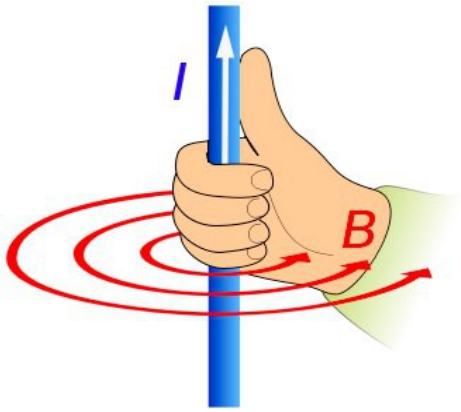
The Righthand Rule



by Miles Mathis

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I have already solved this problem in many previous papers, but since that solution is buried in a larger set of papers, I decided to dig it out and give it its own paper. A reader told me this was one of the most important things I have solved and that it merited a paper of its own, and I agreed.

As you see from the above illustration, the righthand rule is a way of remembering the relative directions of the electric field and the magnetic field. If current is flowing up, there will be a magnetic field arrayed about it in a circle, moving counter-clockwise. But before I came along, this was a rule that only came from experiment. Its root cause was unknown. Why doesn't B move clockwise? No one knows. Or, no one knew until I told them.

If you don't believe me, just ask Google the question. Ask why the righthand rule works. The top-listed result you will find is from stackexchange. Several answers are given, but none of them say anything. They all just flop around and don't get near answering the question. You will find the same sort of misdirection everywhere else. No one knows.

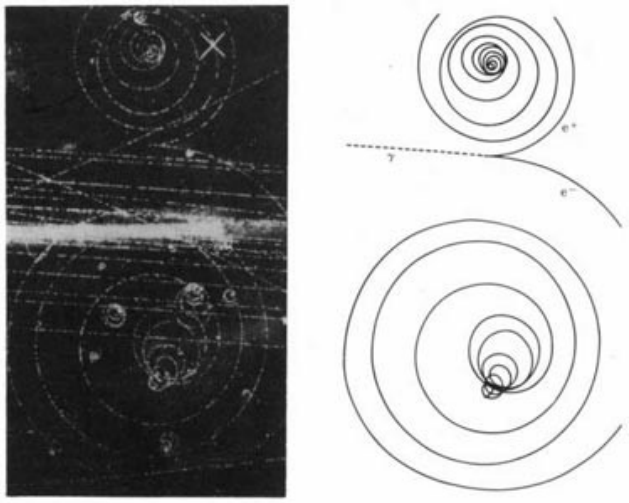
But I have shown it all goes back to the photon. The charge photons determine everything, since all fields are built up from the charge field. The charge field drives everything and is the fundamental physical field everywhere. Ions simply travel on the charge stream, so all electromagnetic effects are based on the photon field. If we want to know what is going on in any EM question, we look to the photons.

The righthand rule comes straight from the photons, because each photon is moving and spinning, with a real spin. Not a virtual spin, a real one. The larger field is then just a straight summation of photon motions.

But why CCW and not CW? Because we are living in a CCW Solar System. The Sun is spinning one way and not the other, and he sets the field here. Most of the photons that come to us on the Earth come from the Sun, and they have been recycled through the Sun. They come to the Sun from the Galactic Core, in long lines of charge through many other stars, then they are pulled into the Solar poles by its vortices caused by spin. They move through the Sun and are released near the equator due to angular momentum, heaviest at 30 degrees north and south.

The Sun emits mostly CCW photons. Why? Because it receives more to start with. The galaxy also spins one way and not the other. We are in a CCW galaxy, so it will skew to that configuration. Other galaxies are CW, and they have a lefthand rule.

So are all photons here CCW? No, about 1/3 are CW, which I call antiphotons. We know this from experiment as well, including beta decay experiments and bubble chamber results:



That's why the spiral of the electron is twice that of the positron: the positron is being spun down by photons, while the electron is being spun down by antiphotons. But because the photons outnumber the antiphotons two to one, the positron is put into a tighter spiral. It suffers twice the collisions, you see. This is also what causes lack of parity in beta decay and other collisions.

So why don't we see a lefthand rule 1/3rd of the time? Because the electromagnetic **field** is a summation of photon spins. That is what a field means. In a given area, the total field is a sum, so the antiphotons tend to get buried in experiment. We don't "see" them in most experiments. Only under certain circumstances is their presence felt, as in beta decay or pair production.

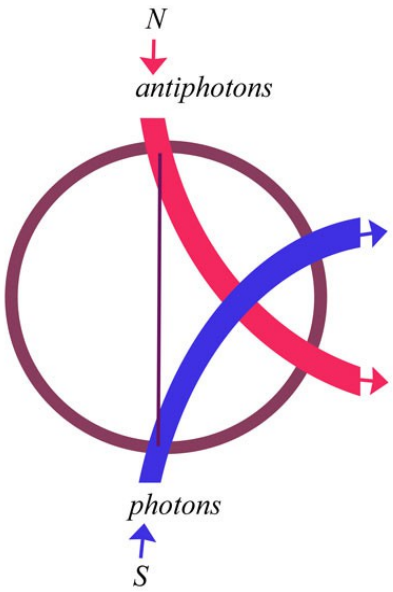
We are also seeing antiphoton fields at work when we find laser cooling, doppler cooling, and things like that. Lasers can be set up to produce antiphotons, in which case the laser will interact with the ambient photon field in an upside-down way, producing cooling instead of heating. This is again due to spin-downs. Opposing spins cancel, creating an energy loss instead of a gain.

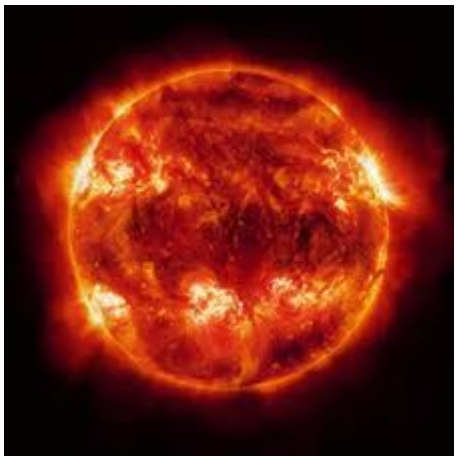
So where do all these antiphotons come from, if not from the Sun? They mostly come from the four big planets, who send charge back to the Sun. They are also spinning, you know, and they recycle charge just like any other body. They take in charge from the Sun, then feed most of it back to him in a loop. But as it comes back, the photons have flipped. Any charge we get from the *outer* planets is antiphotonic, by definition. But why? Simply because it is coming from the opposite direction of the

Sun. You can change the chirality of a photon (or anything else) simply by turning it around. The turn is a reversal, and the spin naturally reverses with it—relative to a given observer. Which means that inner planets don't work like that, relative to us. The light we receive from Venus, for instance, can't be antiphotonic, since she is always on the same side of us as the Sun. Venus is never outside of us, so she can't ever be opposite the Sun relative to us. Does this mean that when the outer planets are on the same side of us as the Sun, they are photonic? That's right. Relative to us, they are photonic in those positions, at least as regards the light we are receiving from them directly, as in the visible light we are seeing them with. However, relative to the Sun, the outer planets are always antiphotonic. That is just to say that the charge moving from them to the Sun is reversed from the charge moving to them from the Sun. And that is equally true of the inner planets. Relative to the Sun, their charge is antiphotonic, since it is moving back to the Sun. But we never see or feel that charge. We aren't in a line to get charge moving from Venus to the Sun, you see.

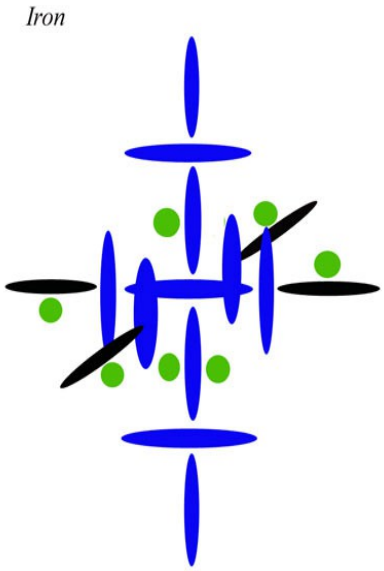
The next thing you need to know about the righthand rule is that it isn't normally caused by the photon field directly. It is caused by the photon field being recycled through the nucleus. The field we normally measure is a field created by matter, not by charge directly. Charge can and does create fields by itself, but since we live in a field of matter, the field we experience has mostly been recycled through the nucleus. So instead of getting the righthand rule from the photon, we can get it from the nucleus. The nucleus is also spinning, and like the Earth, Sun, and galaxy, it gets its spin from the charge field. As the spinning photons move through the nucleus, they spin it up from the inside. They also spin it up from the outside, by direct collisions. And again, the nucleus is spinning one way and not the other, skewing the entire field. This is yet another reason we don't have parity. We should have never expected parity, except as a universal sum.

The difference is, the nucleus isn't moving linearly like the photon, so we can't assign the E field to linear motion, as we did with the photon. To understand how the nucleus creates the E field and current, we have to look at a thing I call through-charge. The nucleus recycles photons in several ways. The basic scheme is the same as the one we see with the Sun. It pulls photons in the south pole and antiphotons in the north pole, releasing them both near the equator, due to simple rules of angular momentum and the sphere. This is the pole-to-equator channel, and it is the primary and fundamental channel in the universe. All spherical and semi-spherical bodies exist on this scheme, from electrons up to galaxies.





But there is a second, lesser scheme of recycling, and that is pole-to-pole. This is the primary scheme of the neutron, but we will skip that for now. In the nucleus, this simply means that photons that come into the poles on the right trajectory can move straight through from one pole to the other, missing the equatorial channel. Some nuclei facilitate this scheme, by having more protons on the poles and fewer on the equator. Since protons act like fans (the photons don't just channel through the nucleus, they channel through the *individual* nucleons as well), herding the photons through the channels, more protons on the poles raise the potential for through-charge. For the same reason, it helps to have more protons on one pole than the other, since this drives charge more strongly in one direction than the other, increasing the pre-existing split. In other words, the field is already skewed to photons over antiphotons, so the nuclear south pole will already be twice as strong (just like the Earth). If you then have two protons on the south pole and one on the north, you double that difference once again, making the south-to-north channel much stronger than the north-to-south channel. You then get a very strong current of linear charge, and it is this current of charge that then causes electric current.



The magnetic field of the nucleus is created in the same way, though different configurations facilitate it. As with electric current, magnetism is carried by the channeled charge field. It is the summed spin of the photons. But to maximize this field, we prefer *equal* numbers of protons on the poles, as you see there with Iron, which has two protons on each pole. Iron also has a weak equatorial level, depicted by the single protons in the carousel level. So charge is forced along the polar channel, and the numbers moving south are as near equal to those moving north as possible, given the ambient field. The opposed channels then spin one another up, increasing the magnetism.

You will say, "Shouldn't the photons and antiphotons spin eachother *down*? If they have the opposite spins, those spins should cancel". No, that would only be true if they were moving in the *same* direction. If photons and antiphotons are both moving in the same direction, and they bump, they will indeed spin one another down, just as you say. But if they are moving in opposite directions, then we are opposite twice. A sort of double-negative in the math or field, you see. In that case, the photons spin eachother up.

So I have just shown you how the righthand rule is caused both from the level of the photon and the

level of the nucleus. Now that you know the answer, you can see why the mainstream didn't know. Mainstream physicists believe the photon is a point particle with no real mass, no real radius, and therefore no real spin. If they give it a chirality, it is only a virtual chirality, to fit the matrices. They also have no antiphoton, and never try to follow real spins in any of these solutions. As far as the nucleus goes, they do not know about nuclear channeling and do not have any useful nuclear diagrams. So they cannot possibly give you the answer I gave you here.