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Milo Wolff answers some Scalar Wave questions asked by Dan Fitzpatrick

Answers by Dr. Milo Wolff

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Milo,

I have to counter this argument by Marco, a PhD.

Here's what he says:

"It seems that I differ from Dr. Wolff. I don't consider the existence of standing waves in free space. Standing waves require reflective barriers."

Thanks Daniel,

He has mixed up different waves. He has in mind electromagnetic waves that are derived from a vector wave equation. On the other hand, the basic waves of matter are quantum waves that obey a scalar wave equation. These are not the same.

Mathematically, he is correct that there are no solutions of the vector wave equation in free space. The only possible solutions involve waves in wave guides - this is the reflective barrier he mentions. The guides or barriers contain moving charges from which the e-m fields are derived.

The question of e-m radiation becomes a puzzle that is usually solved in textbooks by sweeping it under the rug. The problem is that there are no solutions of the vector wave equation for radiation in free space. Instead, the textbook 'assumes' a radiative solution that yields the needed results. Your friend apparently knows this.

This puzzle is resolved by using the fact that electrons are actually quantum wave structures and radiation of energy is actually a quantum wave phenomenon. What we observe as e-m waves are actually a large super-position of many quantum wave electrons transferring energy.

The scalar wave DOES have solutions in free space - only two. These are an IN-wave and an OUT-wave. These can be combined in only two ways. These electron and the positron. Thus we live in a binary universe.

Refer him to quantumMatter.com and SpaceAndmotion.com for more info. Also he can find moving plots of the central waves of an electron on the internet at:

<http://ryanhagan.net/mike/StandingWave3D/StandingWave3D.htm>

http://quantummatter.com/articles/see_an_electron.html

These animated plots show the IN and OUT waves and the SUM of both waves along a radius out from the electron center. He will see that the farther from the center, the smaller the amplitudes become. This is like familiar charge forces or sound or light waves or even water waves which become smaller like $1/r$ as they move outward.

Milo,

It seems to me that since you have proven both the electron and its spin is a scalar, standing wave then the electron's orbital also must be a scalar, standing wave as well.

Yes, electrons are always scalar waves. But There are no orbits. For many (too many) years people imagined atoms as point electrons orbiting around a nucleus. This myth, obviously imitating our planetary system, was shown wrong by quantum theory more than sixty years ago. For example in the hydrogen atom, quantum theory predicts the electron presence as a symmetrical spherical cloud around the proton. Some physicists concluded that the point bits of matter were still there hidden inside, even though quantum theory contains no notion of point particles. The old myth dies hard!

The actual QM 'orbitals' are shown at:

<http://daugerresearch.com/products.html> . . (atom-in-a-box)

Both the orbital and spin give off and receive energy with a change of position so they both must be similar scalar, standing waves.

Correct.

If we consider all these particles, spins and orbitals to be scalar, standing waves then might not this reflective barrier or waveguide, this guy wants, be these other close harmonic scalar, standing wave entities?

You unravel this by recognizing that e-m waves are the superposition of very many scalar quantum waves from very many electrons in the metal guide.

I know it's an in and out wave that extends to the Hubble limit from the center of the electron.

Yes, each electron wave extend to a mathematical infinity. The Hubble radius is an astronomical assumption that cannot be measured. Likewise, infinity cannot be measured. So be careful.

But what forces the wave to these limits?

No forcing involved. The scalar wave equation solutions are out to a math infinity.

Isn't the electron like one key of a grand piano keyboard of the universe?

All electrons are alike. Their waves are alike. If you like, it is a one-note piano.

Aren't these other keys also playing a role in keeping the scalar wave of the electron as such?

Everything grows out of only two assumptions:

1] quantum space exists and has waves of the scalar wave equation.

2] The density of space is proportional to the sum of all the waves at each point. You don't need anything more.

From these two you can get: 1) Ampere's laws which are correct. 2) The electron structure. 3) Other particle structure. 4) All the natural laws. In other words -everything.

Aren't they the reflective barriers?

The metal barriers are atomic structures (obeying 1] and 2]). The active part is the outer electrons.

I've got to write back to this guy.

Good luck.

Milo

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