The Fine Structure Constant Again

by Miles Mathis

First published November 14, 2018

I have written half a dozen papers on the fine structure constant, but as you know I like to keep simplifying my findings as I understand more. Recently I was rereading my old papers and realized I could put this in a more transparent language. So here I am.

In my Bohr Magneton paper of many years ago, I made many corrections to Bohr's old equations, including correcting the angular momentum equation L and dumping improper use of *k* at the quantum level. In so doing, I showed the Bohr radius could be found by the simplified equation

$r = \sqrt{(e^2/mc)} = 9.69 \times 10^{-9}m$

That is about 177 times larger than the current radius. Because that is such a huge correction, one that seems to conflict with some known data, my correction was ignored. This despite the fact that I was able to later use the correction to solve the vacuum catastrophe and other big problems. These big problems require big corrections, obviously, but the mainstream is still not ready to admit that. Well, my Bohr radius is so much larger than the mainstream's because it isn't really assigned to the same thing. Not only does the mainstream have the wrong number, they have the wrong assignment. They assign the Bohr radius to the orbital, but I have shown there are no orbitals of that sort *at all*. Yes, electrons do link up to the nucleus, but they pair up with individual protons in the nucleus. They do not orbit the nucleus as a whole. And I have shown their actual positions are very much closer than the Bohr radius, being right on the nuclear boundary. What the Bohr radius always signified was the *radius of electron capture,* and that is what it stands for in my theory. This is the effective limit of the charge field of the nucleus, and the Bohr radius should signify the boundary of the nucleus' normal charge effect on passing electrons. This explains why the radius is larger than the current radius, and why it does not conflict with data showing “bound” electrons much nearer the nucleus.

Anyway, at the time I tried to link that directly to the fine structure constant 137, but as it turned out the problem is a bit more complex than that. To get 137 from 177 requires a bit more unwinding. I had both the math and the field theory to get it done then, but for whatever reason it didn't happen. In other early papers, I showed that Newton's gravity equation and Coulomb's electrostatic equation were roughly the inverse of one another, with the constants working in much the same way. However, in the first equation G was acting as a scaler, scaling the atomic field *down* to the charge field. In the second, *k* was scaling the charge field *up* to the atomic field. But since the numbers were not the exact inverse of one another, no one saw that before me. There is a difference of about 1.67 between G and 1/*k*. However, in the Bohr paper I also solved that mystery, showing that to match the method of G, Coulomb should have scaled the quantum field up to 1 meter. Instead, he scaled it directly to his data in that specific experiment, where his pith balls were only around 6mm. That created an error in *k* of. . . 177.

In a later paper on the fine structure constant, I did the math, showing where the difference between 137 and 177 comes from. The difference between 137 and 177 is simply √(G*k*). In other words, if we assign the number 177 a letter, say *β*, then *α*, *β*, G, and *k* are not constants, they are transforms, scalers, or corrections. We have seen that they are size specific as well as experiment specific. This allows us to see that 137 and 177 don't match for the same reason G and *k* aren't simply the inverse of one another. G is not 1/*k*. We have a difference of 1.67. So, mathematically, the fine structure constant is a simple *result* of G, k, and *β*. You know what G and *k* are, and I have shown you above and in previous papers that *β* is both the error in the Bohr radius and the error in the charge density. So,

$\sqrt{(Gk)} = 137/177$

or

$137 = 177\sqrt{(Gk)}$

This answers Feynman's biggest question in the simplest manner possible.