

Re: Where is the mathematical beauty of relativity !!!

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- *From:* "Timothy Golden BandTechnology.com" <ttppppggg@xxxxxxxxxx>
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On Jul 15, 3:10 pm, "Sue..." <suzysewns...@xxxxxxxxxxxxxx> wrote:

On Jul 15, 1:27 pm, "Timothy Golden BandTechnology.com"

<ttpppp...@xxxxxxxxxx> wrote:

[...]

I'm not so sure that we just want to recover Maxwell's equations in a new form.

They don't model London forces AFAIK so no harm in reaching for the stars.

They were built on a premise of raw charge but what we observe is that the raw charge carries a magnetic moment inherently. Maxwell's equations are clean. Still, I think it is safe to state that a unified approach denies standard electromagnetism. The raw stationary charge (though it is tough to make an electron stand still) supposedly carries a magnetic moment and this is not supported by standard electromagnetism. Physics circa Y2K simply tacks on the spin as Dirac constructed it. This supposedly binary quality is not actually so clean as the textbooks make it out to be.

Welll.... That is because physics students have to study for banal mathematics examinations leaving no time to get their own house in order. :o)

I've pointed you to the troubles in the past Sue with the spin polarized beam purity maxed out near 80%, when according to Stern and Gerlach all that is

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needed is an inhomogeneous magnetic field to strip out half the beam. Spin is not a binary quality. It is continuous. Most importantly it is possible to see that electromagnetic behavior is a property of spacetime thanks to the electron spin; hence a generic form of 'particle' can exist whose dynamics are partially due to spacetime behavior. Informationally we should shift some complexity into spacetime and remove it from matter.

$e^+ e^-$ annihilation does tend to suggest something like that must be hidden somewhere in the debrisless debris.

The polysign progression does this for us while generating natural spacetime support.

I feel drawn to achieving a stability criteria whereby an electron will merely be a stable form. The electromagnetic tensor can be reduced informationally into a tatrix (triangular matrix) form

a_{11}

$a_{21} a_{22}$

$a_{31} a_{32} a_{33}$

and even the zeros can be accommodated if we up the form one level to

$a_{41} a_{42} a_{43} a_{44}$

where these are a progressive polysign dimensional construction including time.

Now we see a 10 component scalar structure of six dimensions, split at three dimensions, those 10 scalars reducing if we render to six geometrical dimensions in a subbrane configuration. It's all extremely closely linked yet I do not have the motive quite right. I suspect that there is a new math like calculus but slightly more primitive that will work out on the polysign numbers. If that is the case then it will be more like listening to that new math rather than forcing a rabbit to wear a hat.

There are plenty of signals here that line up nicely, but if the old reliance on the real number is wrong then twenty layers out from that core should we really hope to have a clean morphing? This may be a problem for the pure mathematician rather than those steeped in modern physics. Physicists typically treat mathematics as something to be used loosely. At a theoretical level this is a weakness. Modern theory is a collage of math constructions. The physicist comfortably takes freedoms that the anal mathematician balks at. I balk at the real number which both seem possessed by. The continuous/discrete paradigm has a new interpretation in number theory now. It ties directly to

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geometry and satisfies time behavior naturally. I suppose we are overlooking some fundamental mathematics still. Modern practice is to work out on the branches of the tree yet there is something in the core that is still invisible to humans. I think it lays near calculus and especially the interdimensional nature of calculus. For instance when we integrate a 1D curve we get a 2D area. A simplistic $n+1$ relation is also what the progressive polysign basis relies upon. This seems childishly simple to spend any energy on but that is the sort of thing we should see at the base.

It is starting to sound a bit "stringy" to me. Something only a mathematician can appreciate. So far you seem to be making some good progress finding some things in your space-time that line up with our banal and archaic physics. :o)

If you are "slumming" on usenet it must mean you devoured all the papers I didn't get around to reading.

So here are a few more.

<<The new quantum mechanics of Heisenberg, Shrodinger, and Dirac (1926–1928) showed that the orbital angular momentum of the silver atom in the ground state is actually zero. Its magnetic moment is associated with the intrinsic spin angular momentum of the single valence electron the projection of which has values of $\pm h/2$, consistent with the fact that the silver beam is split in two. If Stern had chosen an atom with $L = 1$, $S = 0$, then the beam would have split into three, and the gap between the $m=+1$ and $m=-1$ beams would have been filled in, and no split would have been visible! Vol. II, chapters 34 and 35, and Vol. III, chapters 5 and 6 of the Feynman Lectures gives a lucid explanation of the quantum theory of the Stern–Gerlach experiment. Platt (1992) has given a complete analysis of the experiment using modern quantum mechanical techniques. Here we present an outline of the essential ideas.

http://web.mit.edu/8.13/www/JLExperiments/JLExp_18.pdf

This link says:

"Stern predicted that the effect would be just barely observable. They had difficulty in raising support in the midst of the post war financial turmoil in Germany. The apparatus, which required extremely precise alignment and a high vacuum, kept

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breaking down. Finally, after a year of struggle, they obtained an exposure of sufficient length to give promise of an observable silver deposit. At first, when they examined the glass plate they saw nothing. Then, gradually, the deposit became visible, showing a beam separation of 0.2 millimeters!"

After this they go into cigar smoke with sulfur content which I had not heard about before, but another interesting detail is that the aperture did not work when it was circular. They were getting dim results and what results they had showed a more continuous image. They had to go to a rectangular aperture which widened the image. I read this account from a small book covering some experimental physics though I can't recall the title and author.

I think it is also interesting that so much attention is put to the velocity of the stream of atoms without any regard for their rotational content. This relates to thermodynamics which I have some fundamental criticism of. The rate of propagation of heat in a solid is far slower than the propagation of sound and so the interpretation of heat in materials being vibrational is a misnomer. It must be that the heat energy is in rotational form and that the resultant torque interaction is very slight. Without entering higher dimensional solutions this seems to be the only option. Therefore to overlook such rotational features will be misleading.

Do modern Stern–Gerlach type experiments use a circular final aperture? I did spend some time hunting this back in time but found very little. The original image that I remember shows not two distinct bars on the glass. It shows them weeping toward each other a bit. Skinny down the aperture and they'll bleed together. This would be support for a continuous phenomenon, not a discrete spin.

It seems that this experiment does use slits as described under the Oven section. How conveniently the aperture has been subsumed into the oven. Anytime apertures are used special attention ought to be given to them since their effects are far from the intuitive notion of a clean shadow path filter. I do like this link and especially the stereo image, but where is a skeptical review of this experiment?

Confirmation of 99.9% proton spin-flipping at high energy by a small rf-dipole http://www-spin.physics.lsa.umich.edu/html_meeting/cosy_protFlipApr04...

As I study this article I wind up at <http://accelconf.web.cern.ch/accelconf/e00/PAPERS/MOP4B19.pdf> which for COSY proton beams exposes the same 80% limit as I have seen for the electron beams from GaAs plane emissions, and again with the more conservative 75% figure noted. This is a magic number! Much more

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straightforward than other magic numbers. How your link's team can claim such a high spin flip efficiency off of such a poor beam purity is beyond me. Their lack of discussion of beam purity again is frustrating. Nobody wants to talk about this problem. We humans are subject to the Peter Pan principle.

Chiral Quark Description of the Proton Spin and Magnetic Moment <http://psroc.phys.ntu.edu.tw/cjp/download.php?d=1&pid=485>

It almost looks as if this one is generating an explanation of poor beam purity from the quark sea but I haven't really read it very closely. Anyhow no discussion of the lack of ability to control beam purity seems to enter the language directly. Sorry I'm being a bit stuck on beam purity but I do think it is a strong argument for reinterpretation of discrete spin.

BTW I think most people read too much into the term "spin" in the microatomic realm. In magnetics identifiable charges are moving but with subatomic particles, something is behaving magnetically as—tho something is spinning.

I may be repeating myself, or repeating you or perhaps someone just as honorable and intellegent as you or I. :o)

That's a nice complement to both of us. Thanks for the new links. We perhaps should not even be using the term 'spin' but just magnetic moment instead. The term came as a means of decoupling orbital magnetic contribution within a raw charge interpretation. The modern construction glues the magnetic moment on top of the naked charge. I tend to just focus on the electron but you're making me look at the proton too. Thanks. Almost all of the literature is operating on the assumption that the spin model is correct, yet the contortions that people accept are beyond reason. Beam polarization purity is a simple attack on this theory which takes us back to the Stern–Gerlach level. This discrete attribute can be recovered via proper/improper transformation on a continuum. This is essentially allowing the electron to turn itself inside out which is a dimensional and geometrical feat. This suggests a spin–neutral intermediate on a continuum. The probability of finding such a charged particle is low especially if you accept that it is $n-1$ dimensional; flat as a pancake. Such dimensional phenomena take us over to superconductors and FQHE, which you've introduced me to in the past. So it's probably a good idea to keep an eye out for those sorts of detail. Cooper pairs as inverse spin matching could be a pretty clean interpretation. The

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sweetest way around all of this would be to derive a stable charge.

– Tim

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