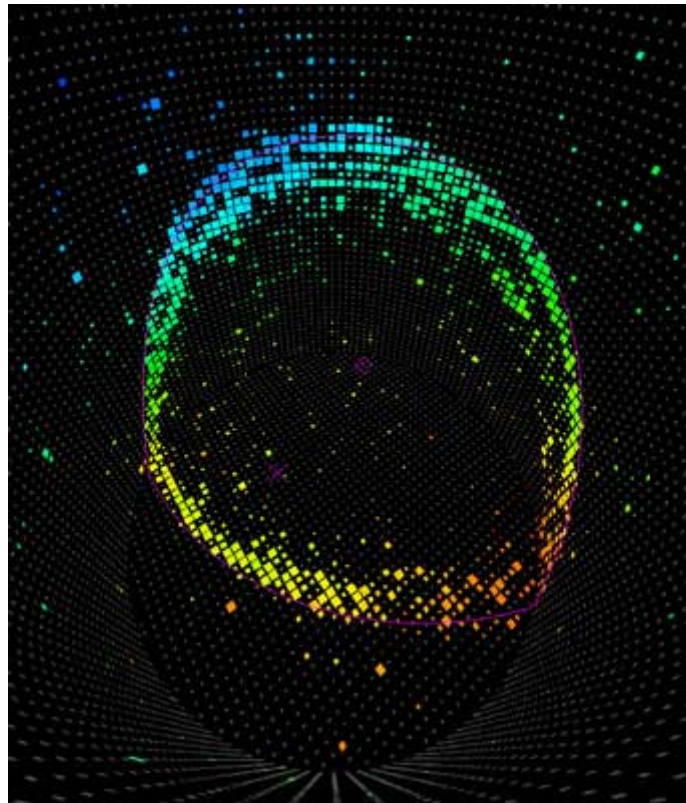


MUCKING UP THE MUON MATH

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Mainstream Relativists have what they think is an airtight theory for the atmospheric muon, but I will show that both the theory and the math are full of holes. In [my first paper on the muon](#), I showed that the theory was quite poor, beginning with the fact that they have muon creation at 9 miles, way below the ionosphere where it should be. I also pointed out that, theoretically and experimentally, their use of SR was suspect, to say the least, since they don't have any method for measuring the altitude of muon production. SR is a theory of measurement. The transforms have to be applied to real data, not to inferences. Their theory is circular because they use time dilation to explain the altitude of production, and use the altitude of production to explain the amount of time dilation.

In this paper I will show the specific faults in the math, going into the transforms to show you how they are covered up and misused. To start with, we will look at the velocity transform. The velocity transform of SR is

$$V = \frac{w + v}{1 + wv/c^2}$$

We have three velocity variables, as you see. Can you figure out how to apply this to the muon? Our mainstream Relativists will say that this equation is used when you have two observables, like a spaceship firing a rocket. But if we have a muon experiencing time dilation, as they claim, then we must have length contraction as well. You cannot have one without the other, and they go hand and hand. Well, if you have time and length transforms, how can you fail to have a velocity transform? Isn't velocity determined by length and time in Relativity? Relativists really cannot answer this simple question, and it is because Einstein didn't give them a first-degree velocity transform for SR. The velocity transform above is for two-degrees of Relativity, and they seem to understand that. But if you have a velocity transform for two observables, shouldn't you have a velocity transform for one observable, like this muon? If its time and length are different, its velocity must be also, right?

Some of them will say “No, there is no velocity transform for one observable, because the velocity is given.” But I say, how can the velocity in both systems be given? If the velocity in both systems is given, then we already know times and lengths. If the velocity in both systems is given, we have nothing to seek and no need of transforms. Besides, if the two systems have different x's and t's, they cannot have the same v's, can they?

Also, if the velocity is given for one observable, why is it not given for two? These Relativists are telling us we don't need a velocity transform for a muon, which must mean that the velocity we see and measure is already correct. The velocity is already in our own system, in other words. If so, then by what mechanism has the velocity of two observables gone underground? If what we see with velocity is already good, then how can it

fail to be good just because there are two objects rather than one? Does the second object cause our eyes and machines to fail?

Finally, if we measure x and t directly in the muon problem as solved by the mainstream, we get 15,000m and 2.2×10^{-6} s. That velocity is way over c . Is that our “given” velocity? No, they will say, our given velocity is $.9996678c$. But how can that be our given velocity, when that velocity comes from another experiment altogether? According to Einstein's equations, the given velocity is v , not v' , which means it is the velocity in our own coordinate system, the velocity we measure directly from our own position, as in a train being measured from the platform. But that means in this problem that $v = 22.7c$. Only $v' = .9996678c$, since that is the local velocity of the muon.

The Relativists will then say, “Velocity is already a relative measurement. Our given velocity is the object relative to the observer.” But that is clearly false, since objects can easily measure their own velocity. The Relativists are claiming we can measure the muon's velocity, but that the muon cannot measure its own velocity. When you are in a car, can you not measure your own velocity? Of course you can, and if you were at very high speeds, your measurement would not be the same as a stationary police car measuring you. That is what Relativity is all about, for goodness sakes. There should be a velocity transform for one observable. I know this for a fact, because in my corrections to SR, I find a velocity transform for one observable, and it happens to be the very same equation as a frequency transform in optics.

The reason mainstream Relativists do not know this is that Einstein didn't know it. They know nothing that he didn't tell them. Because his equations are slightly off, he cannot find a velocity transform for one observable. And if you used his equations to find one, it would be the wrong one. In other words, you can't derive the frequency transform from his equations, but you can from mine.

The next problem is that these mainstream physicists who fudged this time dilation answer for the muon are hiding the length contraction from you. As I pointed out above, if you have time dilation you should also have length contraction, according to Einstein himself. In fact, you cannot have one

without the other. They are hiding this from you because in the muon problem we have a claimed time dilation at the same time that we have a rather obvious length extension. Yes, the x variable has grown by a large margin in this muon problem, since a muon that should have only gone 600m is now claimed to go 15,000m. That is not a length contraction, is it? If you want one of these physicists to go white, just mention this little problem to him or her. Some of the most dishonest will try to tell you that the length has nothing to do with the distance traveled, but that is simply a lie. All you have to do is go to Einstein's equations, or any of the modern updates of them in any form. You will find that the x transform and the L transform, although slightly different, are not in inverse proportion. As L contracts, x contracts. These physicists would have to show you that as L contracts, x gets longer, and they cannot do that without rewriting history. None of them really want to do that, so they just hide and misdirect. They hope you won't notice that their time-dilated muons should be length-contracted. Meaning, yes, they would live longer if they obeyed current theory, but if they obeyed current theory they would go less than 600 meters, not more.

Now, as I said in the first muon paper, I believe in Relativity. What is more, I believe our little muons are "living longer", by the current meaning of that phrase. But they are not time-dilated. Yes, in my corrections, time dilation and length contraction still go together, but they go together for objects that are moving away. Since the muon is moving nearer, it must be time-compressed and length-extended. This immediately explains the increase in x . The muon goes a longer distance, not a shorter, and I can explain that sensibly whether my muon is in a gravitational field or not. I have also shown that "longer life" goes with time compression, not time dilation. Time-dilated objects live shorter apparent lives. Time dilation means that we see or measure their clocks to be going slower. Locally, that means that their clocks are going faster. The dilated clock is what we see: it is the t variable in the equations. But the t' variable is the local variable: it is what the object sees itself. In time dilation, $t > t'$. So the object has the faster clock, locally. Which means it burns out faster than we think it will. We are looking at a clock that is wrong. If all the clocks in your house are ticking too slowly, then you fall behind real life, you do not outrun it.

That being said, I have also shown that there is a limit on time change and length change. SR by itself cannot show increases of 38.8 times, like these physicists are trying to show with the muon. Time dilation is a phenomenon that comes out of SR, not GR. In the muon problem, current physicists are finding their numbers using SR, not GR. But SR simply cannot find that amount of change. The corrected first-degree transforms have a limit of 2. That is, you cannot do more than double a time or a length or a velocity using SR correctly. An object moving at you at c will only double its apparent length and apparent life. Any increase above that must be explained by GR or by a classical gravitational field or by an acceleration field. Current physicists, both in particle physics and in astronomy, are applying apparent mass increases and distances to SR, when they should be applied to acceleration fields. As I showed in my first paper on the muon, physicists do not understand how to accelerate a velocity, and because their equations fail, they must explain the failure in some way. They do this with SR. But my solution in the muon paper can be applied to acceleration fields in accelerators as well. In accelerators, they are accelerating velocities, not particles. Like the atmospheric muon, those particles in accelerators always have their own velocities that are already near c . As with the muon, the field is increasing the energy of the particle directly a lot more than they think, so that very little of the mass increase has to be explained with SR. In the accelerator, it is not the velocity that is the problem, it is the mass; and that is because the acceleration field is not in vector opposition to the particle, as it is with the earth and the muon. In the accelerator, the field is stacked on the particle, and the energy can't go to velocity: it has to go to "mass". But it is not mainly the energy from SR that causes the mass increase, it is the energy lost to the faulty equations. As in the muon problem, particle physicists are using the wrong acceleration field equations, so they don't understand where their extra energy is coming from.

At any rate, I can speak of that in greater length in another paper. It is enough to show that Relativity is being misused all over the place to fill holes in bad equations. SR is a good theory, but it cannot create time increases of 38.8. The specific problem in the current equations is *gamma*, which is in the wrong form.

$$1/\sqrt{[1 - (v'^2/c^2)]}$$

Even Einstein couldn't justify that square root, as I have shown. [In his 1905 paper](#), he simply reduces wrong. There is no square root in his original math. Other physicists have caught that mistake, including Born. In later conceptualizations like the light clock, the Pythagorean theorem is applied to light that passes us on a tangent: the math is applied to a vector we can't see or measure, to light that never reaches us! *Gamma* is a ghost, and once I corrected all the math, I found that *gamma* never once appeared. The closest thing I found was this, from the mass transforms:

$$E^T = m_{ri}c^2 \frac{[1 + (v'/2c)]}{[1 - (v'^2/c^2)]}$$

But, as you see, no square root. And the time and distance transforms aren't even as complex as this. The distance transform is just

$$x = x' / [1 + (v/c)]$$

At the limit of c , x is just twice x' .

Relativity is true, but it can't do all the things it is claimed to do. It is a powerful tool, but it just isn't that powerful. And no matter how powerful it is, it shouldn't be used to cover up bad acceleration equations.

This is the reason I knew I had to correct the field equations in the muon problem. Time and length transforms are simply not capable of making 660m into 15,000m, much less 435,000m. It is the gravity field that is much more powerful than we think it is, and a particle already at c in that field can cover a lot of ground (or air) in a very short time.

Now, to answer a question from a reader about my first paper on the muon. Near the end, I showed that blue shifts prove a vector pointing at the c vector, which we have been told is forbidden. I said that because the

vectors subtract, we do not go over c , and so do not break any rules of Relativity. A reader wrote in and said, "What about red shifts? If you subtract with blue shifts, shouldn't you add with red shifts? And if you do, shouldn't that take the combined velocity above c ?" My reader is correct to point this out. Motion relative to light is never forbidden, whether it is motion toward or motion away. What Relativity forbids is a direct measurement above c , either with one body or with two or more bodies. Neither your eyes nor your machines can tell you that objects are moving over c , because these machines and your eyes use light to see. The light they see with is already in our own system, by a tautology, therefore it is operationally impossible to see or measure above c . However, Relativity says nothing about calculations exceeding c . In some cases they must, as when I assigned all motions to the muon, or as when the mainstream finds a relative velocity of $22.7c$ for the muon. Even with mass increase and time dilation and length contraction, you cannot forbid numbers over c in all cases, since that would forbid legitimate math and legitimate findings. The mainstream explanation of the muon is not legitimate, but its problem is not that number $22.7c$. I have pointed it out only to show it conflicts with their own interpretations, but it doesn't bother me at all. My solution finds an even greater relative velocity. But it doesn't matter because that is not the local velocity of the muon or a direct measurement. It is just a calculation. It is a result, not a real motion.

The problem with the current answer is not that it finds a velocity over c , it is that it misuses time dilation, that it uses faulty equations, and that it finds an altitude for the muon that is way too low to make any experimental sense. Muons shouldn't be created at 9 miles, and good physicists know that. That is why they have to make up more bad math and theory to cover that number. They also know that muons moving for less than $.000002s$ shouldn't be time dilated by a factor of almost 39. That doesn't even fit with their own "dilations" in accelerators, where the acceleration fields are much stronger than the earth's field. But if they moved muon creation up into the ionosphere, that 39 would become something like 600, and would become obvious. So they push and pull and nip and tuck, and mostly they hide the math.

