

A challenge to Tom Roberts re LET,SR and an alternative.

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The reason I am aiming this post at Tom is that I know that he is one of the few people on this NG who has actually studied Lorentz Ether Theory from the mathematical PoV.

My understanding – from a previous post of Tom's – is that in LET what you do (in theory) is apply the Lorentz transforms to and from the aether FoR. The fact that it is impossible to identify the aether frame is less of a problem than it would seem because the Lorentz transforms are such that you can arbitrarily choose any FoR as the aether frame without affecting the answer.

I am not concerned here with the intellectual route which led to SR or the intellectual differences between SR and LET merely in mathematical terms how the two theories are related. In LET one can arbitrarily choose any FoR as the ether frame so the option is open to always choose the observer's FoR as the ether frame. Mathematically SR is the equivalent of doing just that which is why SR and LET are mathematically equivalent.

Now it occurs to me that this, the SR approach, is actually one of two possible approaches which would rid LET maths of the totally arbitrary and unnecessary complication of an aether FoR. The other is to do LET maths always choosing the source frame as the aether frame. Obviously this is not going to change any predictions – it is a legitimate way of doing LET maths and LET maths and SR maths are equivalent.

Today SR has no pretensions to address physical processes, it is simply mathematical modelling, and as the historical route to SR is no longer considered a necessary part of modern physics, even perhaps something of an embarrassment, then one way of mathematical modelling would appear to be as good as any other provided it gives the same answers.

Again considering it from the perspective of LET then what SR does is change 'aether frame' every time you change observer. The alternative approach, choosing the source as the aether frame does not do this and therefore has potential to be simpler while giving the same answers.

It is possible that there is some point I have missed but I was wondering if that approach has been tried, how it works out in practice.

Now ballistic theory is also the *mathematical* equivalent of making the source frame and aether frame one and the same so this approach might be a way by which the predictions of relativistic maths and ballistic theory are more easily highlighted.

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