uni-edit
English Editing & Translation

Sample of thesis English editing

Field of research: physics - electromagnetism

2 Galilean Electromagnetism Re-examined~~–~~

Each of the four cases is comprised~~s~~ of two pairs ~~of~~for comparison: ~~which are~~ (x^0, x^i) and (A^0, A^i) ~~in~~for $\gamma : 1$. By which one is ~~excessive~~significantly larger than the other in each pair, we have these four cases: (1) ~~c~~Case 1: $x^0 ? x^i$, $A^0 ? A^i$~~–~~, $\gamma : 1$;~~,~~ (2) ~~c~~Case 2: $x^0 ? x^i$, $A^0 = A^i$~~–~~, $\gamma : 1$;~~,~~ (3) ~~c~~Case 3: $x^0 = x^i$, $A^0 ? A^i$~~–~~, $\gamma : 1$ ~~,~~; and (4) ~~c~~Case 4: $x^0 = x^i$, $A^0 = A^i$~~–~~, $\gamma : 1$. ~~And i~~If we ~~hope~~assume that the electric field and the magnetic field are not dependent on the electromagnetic four-potential~~–~~, we ~~will~~can ignore ~~the c~~Case 1 and ~~the c~~Case 4.

Comment [BM1]: CHECK: Do you mean 'conditions' here? A 'case' is a 'situation', 'circumstance', or specific set of conditions. A 'condition' is a single 'requirement' or 'specification'. For example, 'in the condition that x > y' and 'In the case that the machine reaches the B state…'. The words have similar meanings but different uses. Please check them carefully.

2.1 Case 1: $x^0 ? x^i$, $A^0 ? A^i$, $\gamma : 1$

In ~~T~~the first case, we consider Maxwell's equations ~~in~~under ~~the~~ conditions (??):~~.~~

$$x^0 ? x^i$$
$$A^0 ? A^i$$
$$\gamma = \frac{1}{\sqrt{(1-(\frac{v}{c})^2)}} : 1. \tag{1}$$

Maxwell's equations are related ~~with~~to the electric and ~~the~~ magnetic fields. Therefore, we first need to know the electric field and the magnetic field ~~first~~ if we want to explore Maxwell's equation~~'~~s in this case.

The electric field and the magnetic field are:~~—~~

$F^{i0} = \partial^i A^0 - \partial^0 A^i$ and

$F^{ij} = \partial^i A^j - \partial^j A^i$~~–~~,

~~–~~respectively. From these two fields ~~listed above~~, it is clear~~we could have a clear clue~~ that we have to ~~discuss~~determine A^α~~'s equation~~ and ∂^α~~'s equation~~ if we want to know the electric field and the magnetic field in this case.

Comment [BM2]: CHECK: It is redundant to say 'A[a]'s equation' when A[a] is itself an equation. It is okay to say 'the equation of A[a]' however, but it seems that you mainly wish to determine the 'value' of A[a]. However, if you are splitting A[a] into A[0] and A[1], then it would be correct to say 'A[a]'s equations' with the plural.

We will ~~explore~~expand A^α's equations first. The ~~original~~basis equations of A^α ~~is~~are:

$$A'^0 = \gamma\left(A^0 + \frac{v_i}{c}A^i\right)$$ ~~,~~ and

$$A'^i = \gamma\left(A^i + \frac{v^i}{c}A^0\right).$$

~~And w~~We ~~take an~~find approximations of these ~~by~~using this case's conditions (condition (1)). The~~refore, the~~ equations of A^α can be rewritten as follows~~ing~~:

$$A'^0 = A^0$$ ~~,~~ and

$$A'^i = A^i + \frac{v^i}{c}A^0.$$

The ~~other~~next equation to be ~~discuss~~determined ~~next~~ is ∂'^α ~~'s equation~~. This~~e equation~~ can be ~~in~~produced ~~by~~from x^α's equation via the chain rule, and since x^α ~~'s equation~~ is easy to ~~be~~ calculate, ~~so~~ we ~~can~~will start ~~from it~~with that. ~~The x^α~~ It's equations ~~is~~are:

$$x'^0 = \gamma\left(x^0 + \frac{v_i}{c}x^i\right)$$ ~~,~~ and

$$x'^i = \gamma\left(x^i + \frac{v^i}{c}x^0\right).$$

We ~~take~~use the same approximation as ~~the last one~~before ~~by~~using this case's condition (condition (1)). Then~~refore~~, the equations of x^α can be rewritten as follows~~ing~~:

$$x'^0 = x^0$$ ~~,~~ and

$$x'^i = x^i + \frac{v^i}{c}x^0 \; .$$

If we use the ~~C~~chain ~~R~~rule from the conclusion above, we ~~will get~~obtain:

$$\partial'^0 = \partial^0 + \frac{v_l}{c}\partial^l$$ ~~,~~ and

$$\partial'^i = \partial^i \; . \qquad (7)$$

Comment [BM3]: CHECK: What do you mean by 'explore' (meaning 'search' or 'investigate', though generally without any goal)? Do you mean 'solve' (i.e., to solve the function) or 'expand' (i.e., to separate it into its component parts). Please check my edit and your usage of this throughout this paper and clarify.

Comment [BM4]: CHECK: Please check what was meant here. 'Original' means the 'earliest' or 'first' (in terms of age). Mathematically, functions may be formed from a 'basis' set of functions or vectors

Comment [BM5]: CHECK: What is condition (1)? It does not seem to have been introduced anywhere. Did you mean Case 1? Please clarify, and check this usage throughout the paper.

Comment [BM6]: CHECK: 'Discuss' can mean to 'talk' about it, 'describe' it or 'examine' it. However, you do not seem to talk about these much, so consider 'solved' or 'determined'. Please check.

Final text

2 Galilean Electromagnetism Re-examined

Each of the four cases is comprised of two pairs for comparison: (x^0,x^i) and (A^0,A^i) for $\gamma:1$. By comparing which one is significantly larger than the other in each pair, we have these four cases: (1) Case 1: $x^0?x^i$, $A^0?A^i$, $\gamma:1$; (2) Case 2: $x^0?x^i$, $A^0=A^i$, $\gamma:1$; (3) Case 3: $x^0=x^i$, $A^0?A^i$, $\gamma:1$; and (4) Case 4: $x^0=x^i$, $A^0=A^i$, $\gamma:1$. If we assume that the electric field and the magnetic field are not dependent on the electromagnetic four-potential, we can ignore Case 1 and Case 4.

2.1 Case 1: $\boldsymbol{x^0?x^i}$, $\boldsymbol{A^0?A^i}$, $\boldsymbol{\gamma:1}$

In the first case, we consider Maxwell's equations under conditions (??):

$$\begin{aligned}&x^0?x^i\\&A^0?A^i\\&\gamma=\frac{1}{\sqrt{(1-(\frac{v}{c})^2)}}:1.\end{aligned}\tag{8}$$

Maxwell's equations are related to the electric and magnetic fields. Therefore, we first need to know the electric field and the magnetic field if we want to explore Maxwell's equations in this case.

The electric field and the magnetic field are:

$$\begin{aligned}&F^{i0}=\partial^iA^0-\partial^0A^i \text{ and}\\&F^{ij}=\partial^iA^j-\partial^jA^i,\end{aligned}\tag{9}$$

respectively. From these two fields, it is clear that we have to determine A^α and ∂^α if we want to know the electric field and the magnetic field in this case.

We will expand A^α's equations first. The basis equations of A^α are:

$$\begin{aligned}&A'^0=\gamma(A^0+\frac{v_i}{c}A^i) \text{ and}\\&A'^i=\gamma(A^i+\frac{v^i}{c}A^0).\end{aligned}\tag{10}$$

We find approximations of these using this case's conditions (condition (1)). The equations of A^α can be rewritten as follows:

$A'^0 = A^0$ and

$A'^i = A^i + \frac{v^i}{c} A^0.$ (11)

The next equation to be determined is ∂'^α. This can be produced from x^α's equation via the chain rule, and since x^α is easy to calculate, we will start with that. Its equations are:

$x'^0 = \gamma(x^0 + \frac{v_i}{c} x^i)$ and

$x'^i = \gamma(x^i + \frac{v^i}{c} x^0).$ (12)

We use the same approximation as before using this case's condition (condition (1)). Then, the equations of x^α can be rewritten as follows:

$x'^0 = x^0$ and

$x'^i = x^i + \frac{v^i}{c} x^0$. (13)

If we use the chain rule from the conclusion above, we obtain:

$\partial'^0 = \partial^0 + \frac{v_l}{c} \partial^l$ and

$\partial'^i = \partial^i$.