A Philosophical And Mathematical Theory Of Everything

Stein Sivertsen

Version 4 - 29.06.2011

Abstract

In this theory I measure the "light speed" per duration of "X particle motions". This basic definition of C exclude the term time (the fourth dimension). Instead it include the term "motion inside a particle" ("a particle's spin" may be a better term). Then, in chapter B1 to B9, I first show the 9 consequenses of this new expression in a philosophical description. In chapter C, I show how these consequenses can be used to explain "The quantum theory of wave / particle duality and the phenomenon of wave collapse". In chapter D the consequenses is described in depth in the mathematical form. I will espesially draw your attention to chapter D 3 wich shows a clear-cut prediction of how the gravity-ratio between two particle-positions, relative to a reference object/particle (for instance a sun), will sharply drop for the particles farthest away from us, from 12 billion lightyears and farther away. This theory shows that not only is mass and "time" relative, in reference to the "constant" C, but also gravity and electromagnetism is relative, here in reference to the constant edge of our universe.

In the mathematical term it can all be summed up with the following equation:

$$E = \frac{mc^2}{(1 + ((r(Ap1/Ap2))/RS))^2}$$

Where

r = Distance between particle 1 and 2

$Ap1/Ap2$ = Surface area of particle 1 / surface area of particle 2

RS = Distance between particle 1 and "All particles original state, the state of singularity, that (in my theory) surrounds / encircles the Universe (S)" for example, 46.5 billion light years"

Contents:

A:
C measured accurately by the basic definitions in the International System of Units (SI) to 299 792 458 metres per duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium 133 atom, may reveal a new model of the relationship between the large and small in our universe, when we put this basic definition of C into the theory of general relativity.

B:
This basic definition of C exclude the term time (the fourth dimension). Instead it include the term "motion inside a particle" (a particle's spin may be a better term). When this basic C is used in the theory of general relativity, we will have a new expression (in three dimensions) of the physical relationship between mass and energy, and what happens when particles moves until they reach the speed of light. This new expression (equation) leads to the following consequences :

1: Motion inside a particle changes in line with the change in the particle's movement through space.
A) When a particle accelerates through space, the motion inside the particle will go slower.
B) When a particle is close to the speed of light, the motion inside the particle will almost cease.
C) Space affect motion inside the particle in line with the change in the particles movement through space.
D) Space affects through resistance against the particles.
E) The resistance from space against the particles increases in line with the increase in the particles movement through space.
F) An increased resistance from space against an accelerating particle slows the motion inside the particle.
G) When a particle is close to the speed of light, the resistance from space will cause the motion inside the particle to almost cease.

2: The resistance from space against a particle reaching for the speed of light will lead to a singularity.

3: A singularity is all particles original state.

4: This original state, the singularity, surrounds the universe.
A) Original antimatter annihilates with this original surrounding singularity, leaving only matter back within the universe.
B) This annihilation causes a pullback of its eventhorizon, and a so called "hawking radiation" as we now regard as the background radiation.
C) The pullback of its event horizon causes an equal expansion of the space within.

5: The force of gravitation from this original singularity that surrounds the universe pulls all the particles inside the universe to itself,
and causes the particles to accelerate the further out the particles in the universe come.

6: When an object, or a particle, is approaching another object, or a particle, the amount of resistance from space decrease between them, while the amount of resistance will be unchanged behind the objects/particles out towards the rest of the space. This difference in the amount of resistance from space, causes space to press the two objects against each other.
This is the physical process behind gravitation.

7: The resistance from space (the physical process behind gravitation) serves as an environment around the particles and can therefore not be detected as part of the contents inside the particles by an accelerator that collides them.

8: Vice-versa: A particle's, or an object's, movement affect space through the particle's resistance against space. A frequency of changes in a particle's, or an object's, movement through space will cause a frequency of changes in the structure of, and resistance from, space. This frequency of changes in the structure of, and resistance from, space, caused by the frequency of changes in the particle's/object's movement through space, spreads outwards with the speed of light, C. When this frequency of changes in the structure of, and resistance from, space is approaching another particle, or an object, it will cause a frequency of changes in this particle's/object's movement.
This is the physical process behind electromagnetic and gravitational waves.

8 B) Point 6 and 8 shows that gravitation and the electromagnetic force are an unified physical property caused by "the resistance from space".

9: All particles moves relative in the following constant frame of reference:

A: In constant reference to the resistance from space (the unified physical property of space causing both the gravitational effect and the electromagnetic wave/particle effect)

B: In constant reference to the singularity that surround the universe (all particles original state that surrounds the universe, causing all particles inside the universe to accelerate the further out the particles in the universe come)

When an object (for instance our moon), or a particle, moves with a different rate of speed relative to an observer (for instance me here on earth), the observer will not be able to observe any deceleration (A) or acceleration (B) in the object's rate of speed in the object's moving direction, caused by A) "the resistance from space" or B) "the singularity that surround the universe". The principle of relativity in the above men-

tioned constant frame of reference causes (A) the same constant deceleration in reference to the resistance from space and (B) the same constant acceleration in reference to the singularity that surround the universe for both the moving object and the observer. The only observable net effect is that the observed object has got a constant different rate of speed that does not change relative to the observer in this constant frame of reference wich all particles moves in reference to.

C:
Quantum theory of wave / particle duality and the phenomenon of wave collapse
How can what is happening in this experiment, be explained by my Theory:

A. First, describe what is seen as an experimental fact:

1. Take an electron.

2. Send it right up to a wall with two open slits.

3. The electron then slams into a dense plate at the back who register it.

4. The plate at the back does not register only one collision, but a number next to each other, as if it was one wave that had passed through both the two slits, later interfered with each other, created several crests (topwaves) and eventually causing multiple collisions next to each other on the plate at the back.

5. Place an observer up next to the wall with the two slits in order to detect which of the two slits the electron passed through. Now the observer does not register any wave, but instead an electron passing through one of the slits and which further collide into the back of the plate, right behind the one slit.

B: What happens physically in the experiment above, described by my theory ? :

To understand what happens in this experiment, we have to use paragraph 8 and 1-D in my theory.

Let us begin at the start of the experiment:

An electron is sent straight ahead.

In accordance with paragraph 8 of my theory "A particle's movement affect space through the particle's resistance against space," "A frequency of changes in a parti-

cles movement will cause a frequency of changes in the structure of, and resistance from, space" and " This frequency of changes in the structure of, and resistance from, space spreads outwards with the speed of light, C".

Therefore, in accordance with paragraph 8, the following occurs: An electron is sent straight ahead. This change in the electron's movement through space causes the same change in the structure of, and resistance from, space. This change in the structure of, and resistance from, space, spreads outwards with the speed of light, C, as a light-wave. Here it has thus occurred two physical events. 1. An electron is sent straight ahead. 2. This has caused a light-wave that surrounds and follows the electron, according to paragraph 8.

Ok. Allow us to continue at the wall with the two slits.

An electron surrounded by a light-wave is coming to the wall with two slits in. What happens?

The light-wave with the electron in is passing through both slits, afterwards interfering with each other, creating several crests and eventually causing multiple collisions next to each other on the back plate, of which the electron is one of them. Here the light-wave passed through both slits, BUT of course the electron went through only one of them as this is still a physical particle with mass in.

Ok. Get the observers, and place them next to slit 1 and 2 in the wall.

1. An electron is sent straight ahead. 2. A light-wave surrounds and follows the electron according to paragraph 8.

An electron surrounded by a light-wave is coming to the wall with two slits in. What happens?

First, the observers continuously records what is happening at / in each slit by setting up an electromagnetic field at / in the slits. So when the light-wave with the electron in is meeting the wall with the slits, it collide into, interfere with, before it collapses in the electromagnetic field at / in the slits, the electromagnetic field at / in the slit where the electron is then hits the electron, changes the electron's movement through space according to paragraph 1-D and 8, this change in the electron's movement through space causes the same change in the structure of, and resistance from, space which then spreads outwards again as a light-wave out of this one slit according to paragraph 8. The observer at this one slit receives the reflected light- wave, reports the discovery of the electron, and the light-wave with the electron then bangs out of this slit and into the plate at the back, just behind this one slit.

Thus, acc. to my theory an electron is only an electron and a light-wave is only a light-wave, even though a light-wave surrounds and follows the electron.

D: The mathematical description

D1:

The core of my Theory of everything, which is described in my philosophical foundation at post A to C above, is the term "resistance from space against the particles". Where the theory of relativity indicates that energy is equivalent to mass, I write "resistance from space against the particles". The theory of relativity describes this mathematically with the famous expression $E = mc^2$. I have described my theory mathematically and have formalized mathematical: "The resistance from space against the particles" (MRP) relative to the countervailing attraction from "All particles original state, the state of singularity, that surrounds / encircles the universe (S) ", by the following equation:

$$MRP = (1/(\sqrt{1 - (v^2/c^2)})) * (m/(Ap/Rp^2))$$

MRP = resistance from space against the particles = Electromagnetism and gravity quantified in one unified force.

v = The speed of particle 1 relative to particle 2, measured by an observer.

c = The basic speed of light (see full definition below)

m = The mass in kilograms of particle 1 relative to particle 2, measured by an observer (if your mass here on earth is 80 kg on a weight scale, then your mass relative to earth is 80 kg)

Ap = particle's surface area

Rp = distance ratio between particle 1 and particle 2 =

$$Rp = 1/(1 - (1/(1 + ((r(Ap1/Ap2))/RS))))$$

r = Distance between particle 1 and 2

Ap1/Ap2 = surface area of particle 1/surface area of particle 2

RS = distance between particle 1 and "All particles original state, the state of singularity, that surrounds / encircles the Universe (S)" for example, 46.5 billion light years

C = The basic speed of light, where time is excluded and replaced with "Motion inside a particle", see full definition below:

299 792 458 meters per duration of 9,192,631,770 periods of the radiation corresponding to the transition between the two hyper-fine levels of the ground state of cesium 133 atom.

Where "9,192,631,770 periods of the radiation corresponding to the transition between the two hyper-fine levels of the ground state of cesium 133 atom " is a help-variable to denote the physical "Motion inside a particle"

D2:

My assessment is thus an equation to measure the change in MRP for a particle that changes the speed and distance to another particle, relative to an observer at rest.

The ratio $(1/(1+(r(Ap1/Ap2)/RS)))$ = density of the particles measured in relation to the RS. If the ratio $(m/(Ap/Rp^2))$ converted to the objects mass / the objects radius exceeds the "SchwarzSchild radius", ie the solar mass / a radius of 2.95 km, it enters the boundary for a singularity (which otherwise occurs for all particle collections that achieves this rate of density, BUT this "SchwarzSchild radius" changes in line with the change in RS according to my theory!

According to Newton's gravitational theory the gravity of an object located three times closer to the sun as object 2 has nine times the force of gravity relative to the sun, according to $G*(m*m)/r^2$, where "r" is the distance to the sun and "G" is a proportionality constant. Once we here takes: $(m*m)/r^2$ for the object closest to the sun / $(m*m)/r^2$ for the object located three times farther away, we get the ratio 9.0 between the two. Let's test my assessment in relation to what we know is the result of Newton's theory of gravity. Does my assessment give a result that is similar to Newton's equation in ordinary distances?

If a particle at position 1 has mass of 3, the number of distance units to particle 2 is one light year, the number of distance units to the singularity surrounding the universe is i.e 13,7 billion light years, the total surface area is 10, we get the following value

in the MRP (assuming the speed v = negligible compared to C:

MRP 1 for particle 1 in position 1 is in relation to particle 2: 5.6307 E 19

If particle 1 is then located in position 2 and the number of distance units to particle 2 is now three times as large, 3 light years, the number of distance units to the sigularity surrounding the universe is i.e. (13.7 billion light years [-2 lightyears, +2 light-years]) we now have the following value of MRP:

MRP 2 for particle 1 in position 2 relative to particle 2: 6.25633 E 18

MRP 1 / MRP 2 = 9,000000000000000000000000000000000000000000

The ratio between position 1 and 2 we now get no matter the distance between particle 1 and particle 2 when the distance at position 1 is three times closer than at position 2, BUT except when the distance to "S" (RS) start to be "small". This suggests, in my view, that the equation is applicable in measuring the change in MRP (ie measuring the change in gravity between the particle positions in space).

D3:

My equation therefore predicts that gravity between two particles will change in line with the change in RS. This can be tested against observation ! Here is a link to the picture that shows how the ratio $MRP1/MRP2$ changes in line with the change in distance between the observed particles and the singularity surrounding our universe (RS). (Here I have used the range from 13,7 billion lightyears to 0 billion lightyears) :

Prediction 1:
Click on this link to get the picture

This picture show a clear and sharp drop in the gravity-ratio (gravity in position 1 / gravity in position 2, releative to a reference object) for the particles farthest away. For the objects / particles that are 13 billions lightyears away from us today (at point 70 at the X-line in the picture above) we should be able to observe this drop.

Prediction 2:
Click on this link to get the picture: C, the speed limit, is higher inside dense matter than the observed light speed in vacuum out in the universe

D4:

My work is similar to what Einstein (special relativity) and Robert Hooke/Newton (gravity) also came to, but I hope that my formula is more accurate and descriptive for the physical reality. The interesting difference is, as described above, that my equation takes into account a link to my hypothetical singularity (all particles original state) surrounding our universe, that changes the gravity between the particles in line with the change in the distance to it.

It is also interesting with the relativistic coupling of the form $(1/(\sqrt{1-(v^2/c^2)}))$ so that the change in MRP caused by the change in the particle's speed, can be measured relative to an observer with unchanged speed. Here changed velocity of a particle leads to change in MRP. This change in MRP spreads outwards into space with the speed of light, C, as an electromagnetic wave. When this change in MRP is hitting another particle, it will change this particle's movement/speed similar to the change in MRP, electromagnetic, as follows:

$$\frac{MRP}{(m/(Ap/Rp^2))} = (1/(\sqrt{1-(v^2/c^2)}))$$

When this electromagnetic change, let's say an increase in MRP, is hitting another particle, and no other changes have occurred so that the expression $(m/(Ap/Rp^2))$ is unchanged for the hit particle, then the only consequence, is that the movement/speed, the term on the right side of the equation showed above, for this particle is increased, electromagnetic. The equation for MRP is therefore the function of electro-magnetism and gravity unified in one physical force, MRP.

Now: The equations described so far shows what happens with the forces of gravity and electromagnetism when a particle *changes* the speed and distance to another particle

Now we are actually able to set up the following "$One-inch-equation$" to describe the total $Energy(E)$ related to our particle 1 caused by the universe that we are placed inside:

$$E = \frac{mc^2}{(1+((r(Ap1/Ap2))/RS))^2}$$

If r (the distance between particle 1 and particle 2) equals 0 then the particle's energy $= mc^2$.
When the distance between the particles (r) increase relative to RS, the energy E will decrease (though allmost negligible). Only when RS start to be small the decrease in E will be of significance. The equation may also be used to describe our degree of $Love$, $Peace$ and $Happiness$. If we use time to distance ourselves from our family, friends and peers our $Energy$ will decrease. If we gets more $Mass$ (food, and usefull things) over time our $Energy$ will increase. Here you can let RS be your total lifetime, $Ap1$ you and $Ap2$ your fellowman.

The relativistic coupling also describes the change in the "motion inside a particle" (before wrongly called "Time") as a result of the change in the particle's speed, relative to an observer with unchanged speed. This is expressed as follows:

The change in the "motion inside a particle" as a result of the changes in the particle's speed relative to an observer with unchanged speed =

X multiplied with the help-variable used to denote "motion inside the particle", for example: X multiplied with "9,192,631,770 periods of the radiation corresponding to the transition between the two hyper-fine levels of the ground state of cesium 133 atom " $/\sqrt{1-(v^2/c^2)}$

If the speed of the observed particle is approximated to C relative to the observer, the observer will experience an infinite number of motions in his bodie's particles (physically speaking) before (X "motions in the observed particle") is completed. But be aware that this is not only a theoretical / mathematical consequence, but a direct physical consequence that happens when the increased speed of a particle causes "the resistance from space against the particles", MRP, to increase accordingly. And it is this increased resistance from space against the particles, MRP, which physically limits the "motion inside a particle".

It's interesting to think of what actually may be the basic physical reason to why Rp^2 (or Newton's / Hooke's r^2) works so well in these contexts, and particularly why I think it is crucially important and proper to include the particle's total surface area to this formula: In the world of optics it is measured and found that the light intensity (electromagnetism) on one surface (which does not absorbs light) changes with the square of the distance to the light source (where the light source emits light in all directions). This is in optics called Irradiance. And when it is assumed that electromagnetism and gravity are two sides of the same coin, that it is one and the same force, it is not surprising that the square of the distance and surface area, works perfectly here.

E: References

Aristotle: (384 BC – 322 BC)

Newton, Isaac: “Philosophiæ Naturalis Principia Mathematica”, first published 5 July 1687.

Robert Hooke: (Born 18. July 1635), letters to Newton concerning the law of gravitation, November 1679 to January 1680. ((H W Turnbull (ed.), Correspondence of Isaac Newton, Vol 2 (1676–1687), (Cambridge University Press, 1960), giving the Hooke-Newton correspondence (of November 1679 to January 1680) at pp.297–314, and the 1686 correspondence over Hooke’s priority claim at pp.431–448.)

Einstein, Albert: (1905a), ”Zur Elektrodynamik bewegter Körper”, Annalen der Physik 322 (10): 891–921.

Stephen Hawking: “Black-hole evaporation”, Nature 248, 30–31, January 17, 1974.