EXTENDED QUANTUM MECHANICS (EARTH IS ALSO THE QUANTUM OF ELECTROMAGNETIC FIELD)

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Preface

Quantum mechanics can be applied to big masses also. This will solve many problems of modern physics like dark matter. This is the big problem of physics for so many years. This solves problem of dual nature of quantum like interference by single photon. This theory will start new relativity other than Einstein relativity which balances relativity of small particles & big masses by similar consideration. It is just found that some galaxies do not contain dark matter & some have abundant dark matter. Means, dark matter is real & different than known matter. This theory gives require explanation to this problem.

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.1. **Earth is also quantum of electromagnetic field**

One day, Author was writing something on paper & he got this idea. Can we write something in vacuum? No, we cannot write anything in vacuum because vacuum has no meaning. We require some paper to write. Similarly, this world is also very beautiful story written on paper called space & cannot be written in vacuum.

Means, space is different than vacuum then one question arises. What is the space?

Same problem is arises when I proved that special theory is mathematically wrong in my last paper on www.vixra.org/abs/1611.0096 . (same mathematics given in last chapter of this paper)

If Special theory of relativity is wrong then velocity of light will not be same with different observer then how will we satisfy Maxwell wave equation by alternative mathematics & Mickelson-Morley experiment, which prove that velocity of light is constant in all direction on earth.

This all problems can be solved by the simple way. For example, Electron in the Atom of substance always expresses our velocity with relative to electromagnetic flux of atom acting on it. Whatever may the velocity of substance be with related to anybody. Velocity of electron around

nucleus remains same until exited.

This is true for Photon also, when Photon is in glass substance, it express our velocity with related to electromagnetic flux of glass (combine balance fields of all particles of glass). So, glass may have any velocity with related to other substance but this velocity of photon with relative to glass remains same in all direction inside the glass.

Same thing happen on earth, just consider only negative charge of electrons of earth then very high –ve electrical flux is present around it. This flux is balance by +ve protons flux & resultant is balancing of opposite flux. This balance electromagnetic flux & gravity is present all around Earth. This creates local space for substances & particles on earth. All elementary particles & photon express our velocity with related to this flux. This is reason for getting velocity of light C on earth in all direction. This is not due to SR but due to property of photon & local space.

I said that electromagnetic flux around big mass creates space. One may asked that can we calculate it around earth. I can prove that this is possible.

for example at 100000 km from earth

I have done some calculation

No of protons on earth $= \dfrac{5.92 \times 10^{24}}{1.67262 \times 10^{-27}} = 3.53935 \times 10^{51}$ Nos

(considering neutron can be split in to proton & electron pair)

+ve Charge on earth due to protons = $3.53935 \times 10^{51} \times 1.6 \times 10^{-19}$

= 5.66297×10^{32} Coulombs

Attraction force on ball caring one coulomb of -ve charge at distance of 100000 km from earth

$$=\frac{8990000000 \times 5.66297 \times 10^{32}}{100000000 \times 100000000}$$

$$=5.09101 \times 10^{26} \text{ N}$$

This calculation shows that even at the distance of 100000 km earth's protons apply **very powerful attractive charge force** but this force is balance by force applied by total electrons on earth in opposite direction.

Means, very powerful balance electromagnetic flux is present around earth at very very long distance also.

This balance electromagnetic charge flux at long distance must caries gravity.

This create the effect of dark matter (additional gravity due to space)

Electron space & earth space are equivalent   :-

Nuclear space	Earth space
1) Electron in the Atom of substance always expresses our velocity with relative to electromagnetic flux of atom acting on it. Whatever may the velocity of substance be with related to anybody. Velocity of electron around nucleus remains same until exited.	1) Same thing happen on earth, just consider only negative charge of electrons of earth then very high –ve electrical flux is present around it. This flux is balance by +ve protons flux & resultant is balancing of opposite flux. This balance electromagnetic flux & gravity is present all around Earth. This creates local space for substances & particles on earth. All elementary particles & photon express our velocity with related to this flux. This is reason for getting velocity of light C on earth in all direction.

One of my friend said that he is in train moving with velocity V then what will be velocity of photon with related to me in train?. I said according to my theory of local space, velocity photon in all direction will be C because Photon is so sensitive that if you want to find its velocity with instrument, it express our velocity with related to balance electromagnetic flux present around measuring instrument.

So, whenever there is photon or light near to you its velocity with related to you or measuring instrument will be same in all direction i.e. C.

This is simple solution which satisfies both above problems. Not require Special theory of relativity but just local space theory.

This concept of local space is not new; actually we are using it every day. For example, for calculation of kinetic energy or velocity for substance on earth, we do not fixed reference frame on moon but fixed on earth surface. Velocity of free electron in metal is measure with related to metal frame of reference & velocity of electron in atom is considered with related to atom frame of reference. Mean's actually, we use this local space theory every day knowing or unknowingly.

Around every substance, this local space is present. This substance may be atom, glass, train, earth or star.

I was writing something on paper. I got this idea. We cannot write anything in vacuum. We require some paper. Same is with the world. We require some frame to express our activity. For all elementary particles, this paper is balance or unbalance field acting on it.

This simple thought create concept of space. Space is created by substance. For example, atomic space is created by the charge flux of the atom; intra molecular space in the glass is created by collective balance flux of all electrons & protons of the complete substance & their gravitational flux. Space around earth is created by balance flux of all electrons & protons of the complete

earth with its gravity. (As next chapter is consider, it is due to collective flux of +ve & -ve energetic particles in matter which will be very powerful than this)

This concept of space solves lot off problems in physics:-

1) Mickelson-Morley experiment find that velocity of light is constant in all direction on earth surface.

   Answer: - Photon on earth surface expresses our velocity or kinetic energy with related to the local space of earth created by electromagnetic flux of all particles of earth & gravity of earth. So, photon velocity is same in all direction on earth surface.

2) Is this theory satisfying Maxwell wave equation?

   Answer:- Yes, this theory satisfy Maxwell wave equation for example one of my friend ask me that he is in train moving with velocity V then what will be velocity of photon with related to me in train?. I said according to my theory of local space, velocity of photon in all direction will be C because Photon is so sensitive that if you want to find its velocity with instrument, it express our velocity with related to balance electromagnetic flux present around measuring instrument. So, Maxwell equation

$$\frac{d^2 E}{dx^2} - \frac{1}{c^2}\frac{d^2 E}{dt^2} = 0$$

is always true in local space. As velocity of photon is always C in this local space or local frame of reference in all direction. So, any instrument will always measure velocity of light as C & this equation is always remaining true in local space.

3) Refer chapter C in paper   www.vixra.org/abs/1611.0096 i.e. "RELATIVE VELOCITY MAY BE MORE THAN VELOCITY OF LIGHT". In this chapter, Author proved that velocity of stars from west to east is more than C for frame fixed on earth due to its angular velocity of earth.

Answer:-As per my local theory of relativity is consider, this velocity is apparent velocity. This is because stars are not present in local space of earth. So, we can get different apparent velocities for many different stars or planets for frame fixed on earth but all velocities are apparent velocities. These apparent velocities have no meaning in physic.

4) Distant galaxies are moving away from us with velocity more than C.

Answer:- This is also apparent velocity & not velocity in local space. So, this is meaningless velocity. This has no physical or scientific meaning.

5) Clock on earth move slower than GPS satellite clock.

Answer:- As local space of earth is created by electromagnetic flux & gravity of earth, this flux definitely have effect on properties of space like

time. It is slow down when this flux is more. So, clock on earth surface move slowly than clock on satellite.

What is dark matter?

Abstract:- Space carries gravity.

When you are going deep inside earth, you will find that gravity of earth decreases. This is because some matter of earth pulls you in opposite direction. Near to the core of earth this gravity will be very less.

Similarly, around every big mass very large balance electromagnetic flux is present which create local space to that matter. This (balance electromagnetic flux) space also carries mass & gravity. For example**, total earth gravity is not due substance on earth but also due to balance electromagnetic flux or local space around earth**. So, when you are on earth, you will not fill total gravity of earth as some additional local space of earth is above you. When you move away from earth, gravity decreases as distance of solid earth from you increases but additional local space near to earth applies small additional gravity on you. When you are far away from earth, total gravity act on you is the total gravity of solid earth plus gravity due to local space of earth spread around it.

This electromagnetic flux is very high for very big matter like big stars, black hole & galaxy. This gravity of electromagnetic flux around big matter is **more active at long distance than near to it**.

This is the reason for additional gravitation present in the space. **As space also has gravitational effect & space has very large volume, this gravitational effect is much more than consider.** Experimental Evidence:- It is found by NASA that x-ray get emitted from centre of galaxy where black hole is located.

This is because **near to** black hole very high balance electromagnetic flux is present due to very big mass in the black hole. It is so high that when any matter or gas inter in to near space of black hole. Electrons from that gas automatically get exited due to potential spike of high electromagnetic flux. This automatically exited electron tries to cool down by loosing high energy photon. This may be the reason to get x-ray emission from near space of black hole.

How does all elementary particle present in wave & particle form?

Answer:- This is like one **singing person** is walking on road. The person will now represent particle & song or vibration in local space will represent wave nature. Detail is given in next chapter.

Quantum mechanics below elementary particle level?

Abstract: - Matter is simply made from Two quantum of +ve & -ve charge fields . You may call it as charge spike in local space. Detail is given below.

WHAT IS MATTER & ADDITIONAL DARK MATTER MADE UP OF?

Author has some basic problems in physics.

1) What is the world made up of? This world is made up of matter, dark matter & different radiations. How is this all formed?

2) <u>Established concepts are, light is the flow of photon and photon is the bundle of energy. Second concept is, energy is the capacity to do work. Both concepts cannot be true at once.</u>

   Can anybody make bundle of some capacity. No, this is completely impossible thing. For example, someone has capacity to pick the book from table and do some work. Can somebody make bundle of that capacity? No, means photon cannot be consider as bundle of energy. <u>Means, photon is not the bundle of energy but something else</u>. In this paper, Author will try to give answer of this problem.

   Mathematically it is already proved that total energy of photon is kinetic energy & it is impossible to create a bundle of kinetic energy.

3) In Nature, energy acts as an effect of properties of a matter. For example, gravitational energy is the effect of gravity and gravity is the property of matter. Magnetic energy is the effect of magnetism and magnetism is the

property of magnet and mass itself is the fundamental characteristics of the matter.

Then, how can someone say that mass m i.e. one characteristic of matter can be changed in to energy? (Which is effect of properties of matter). Answer of this problem is given in this chapter.

4) If a cube of sugar disintegrates, we say that it is made up of some other particles. (i.e. Molecules of sugar)

But, if we find molecules of sugar that too disintegrating, then we can say that it is made up of some other particles. (i.e. atoms and atom is made up of electron, proton, neutron etc)

But, now we find electron, proton, and neutron i.e. elementary particles also getting disintegrated. So, we can say that they are made up of some other particles.

Now, fermions, gauge bosons, and the Higgs boson are also disintegrated for example, electron & positron create photonic emission, photon also gets disintegrated into electron & positron pairs and then we can say that they are not original particles or made from other particles.

But of what? I intend to solve this problem.

4) What is dark matter in Universe? Whose quantity is more than seen matter & whose existence is detected by its gravity only.

5) Photon is charge less particle but when wave nature of light is considered. It is electromagnetic vibration. How is this possible?

There are too many other problems. To solve all these problems, I would like to propose one theory.

THEORY

I think this whole world is made up of two very very small particles (or packets) having similar positive and negative charges and other properties are exactly similar. (Just act as anti particle of one another).

$$\oplus \qquad\qquad\qquad \ominus$$

This small +ve and –ve charges and small gravitational field are responsible for every energy in nature. For example, gravity is due to small gravitational field. Magnetic and electric, these energies are due to its charges. (Other can be defined by the same way.)

It means, every energy in nature is the effect of properties (charge and gravity) of these small energetic particles. (Which are also original particle of nature.)

Every elementary particles or photon is made up of the network of these energetic particles. It is seen as cloud of charges.
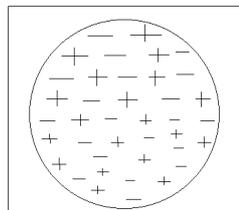
In elementary particle when –ve energetic particles are more than +ve energetic particles (fundamental particles). It gets –ve charge.

When +ve energetic particles are more. Elementary particle get +ve charge.

And in neutral elementary particles (photon also) +ve and –ve energetic particles are equal in number.

For every elementary particle

Total energy $\propto$ (no. of energetic particle present in it)

i.e. E $\propto$ N --------- (1)

And as elementary particles are made up of energetic particles.

Mass of elementary particle $\propto$ N

i.e. M $\propto$ N -------------(2)

From equation (1) & (2)

E $\propto$ M

i.e. E=K M -------------(3)

Here K= proportional constant

We know, what are those energies of elementary particles?

So, total energy of elementary particle = gravitational energy + charge energy + magnetic energy + kinetic energy +potential energy

i.e. E=K M = E gravi + E charge + E mag +E kin + E pot

Here, E gravi : - Capacity to do work by small gravitational field.

As, E gravi is very small as compare to other energies. Hence, for any elementary particle.

Total energy = E = K M = E charge + E mag + E kin + E pot

Here, charge energy: - capacity to do work due to its charge.

Magnetic energy: - capacity to do work due to its magnetism.

Kinetic energy: - capacity to do work due to its momentum.

Potential energy: - if magnetic or charge field of this particle acts on other but work is not done then possible work acts as a potential energy of the particle.

In case of photon, E charge = E mag = E pot = 0

So, E = E kinetic = K M

Here, kinetic energy of photon is divided equally in two parts, external energy i.e. energy due to linear motion (linear kinetic) & internal energy due to cumulative angular motion (due individual or collective spin and simultaneous vibration).

i.e. K M = E linear + E angular

as, E linear = E angular

$K M = 2 . E linear = 2 . (\frac{1}{2}. M C^2) = M C^2$

Therefore, $K = C^2$ -------------------(5)

From (3), (4) & (5)

$E = M C^2$ ---------------------------------(well known equation)

And, M C^2 = E charge + E mag + E kin + E pot

Author call above equation as **ELEMENTARY ENERGY EQUATION.**

Above equation is true for every elementary particle.

{Some physicist may say that this is against famous relation of quantum mechanics.

$E = \sqrt{m^2 c^4 + c^2 p^2}$ but if I put p = γ m v then output will be

E = γ m c2

i.e. E = relative mass . c2

So, My equation is not much different

Only thing is that to consider photon as bundle of energy is not required}

One of the physicist said that you are wrong because rest mass of photon is zero.

My answer:- total energy of photon is kinetic energy or total energy is due to its momentum (unlike electron or proton). So, its reverse mathematical meaning is if photon is at rest then its energy, mass or momentum is zero.

But photon cannot be at rest & mass cannot be zero. Zero rest mass of photon is just mathematical effect of above equation.

In case of non-charge particle like photon & neutrino as their total energy get expressed as kinetic energy. Their velocity (c) is much & much greater than other particles like electron & proton etc. whose energies get express in other forms also, like charge, magnetic energy etc. This is already proved.

Wave nature of particle

(There is no explanation for dual nature of particles in world until now. It is accepted as fact without explanation. How single particle can cause interference etc are still the problem for physics)

Author thinks that size of energetic particle is very small & every energetic particle is surrounded with very strong electric charge field whose size and reach is much more than particle size. This is some thing like packets of +ve & -ve charges living together. Due to attraction and repulsion between all particles in elementary particle, there is resonance of charges in elementary particles. This charge resonance creates magnetic resonance in perpendicular direction. This will create electromagnetic resonance or wave nature of elementary particle.
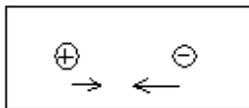
Resonance of particles
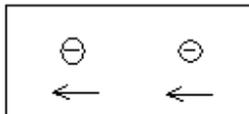
Equivalent picture is same
charge is vibrating in
same direction

Resultant is charge &
magnetic field resonance in
perpendicular direction
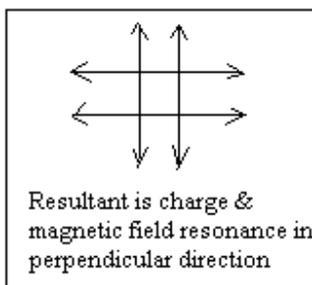
(As motion of +ve particle towards right side, its electromagnetic effect is equivalent to motion of –ve particle towards left side.)

So, when this particle moves from space, electromagnetic resonance moves with it instantly.

For example, photon A is moving through the electromagnetic wave recorder then electromagnetic pulse which it will recorded will be like following signature

A ———————→

| |
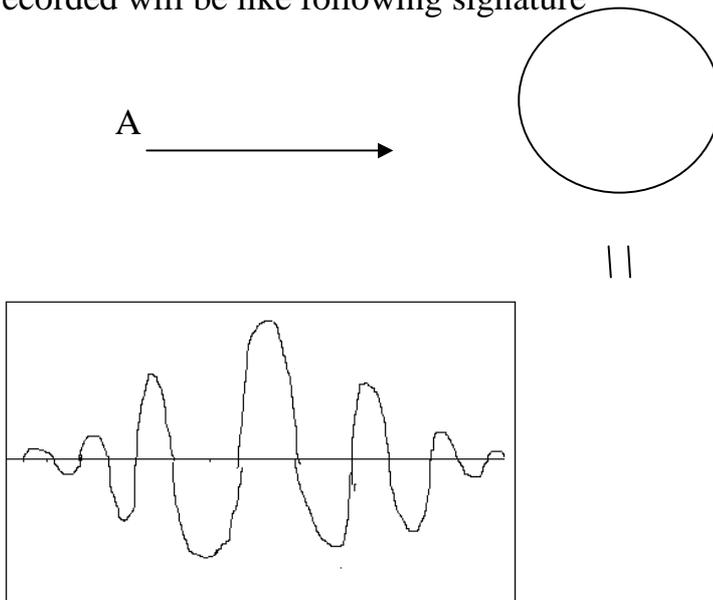
Wave Signature

Position of photon is near to where amplitude of wave will be much higher. For stationary observer this behavior is like pure electromagnetic wave pulse. Locally electromagnetic overlapping is instantaneous. So, its effect is instantaneous at some distance forward & backward of photon. So, we get wave signature up to some distance.

Dispersion:- If size of slit is less than wave length of electromagnetic light pulse. Photon is not dispersing but electromagnetic disturbance whose behavior is like wave will get spread in opposite side.

electromagnetic disturbance in all direction

direction of photon
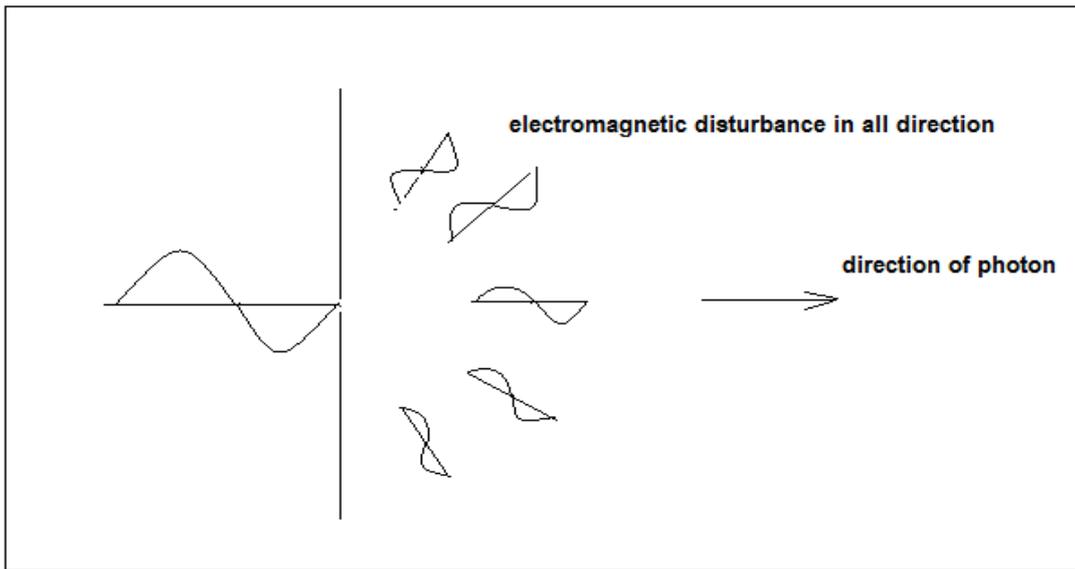
Interference:- In interference, this disturbance from original slit passes through two other slits S1 & S2 & that create interference fringes. Then what ever may be the path of photon, until wave or electromagnetic disturbance passes through original slit, overlapping of disturbance will happen after slit S1 & S2 instantly. This will forms the interference patterns. This pattern will not be depending on path of photon.

electromagnetic disturbance in all direction

observer observed interference fringes

S1

S2

direction of photon
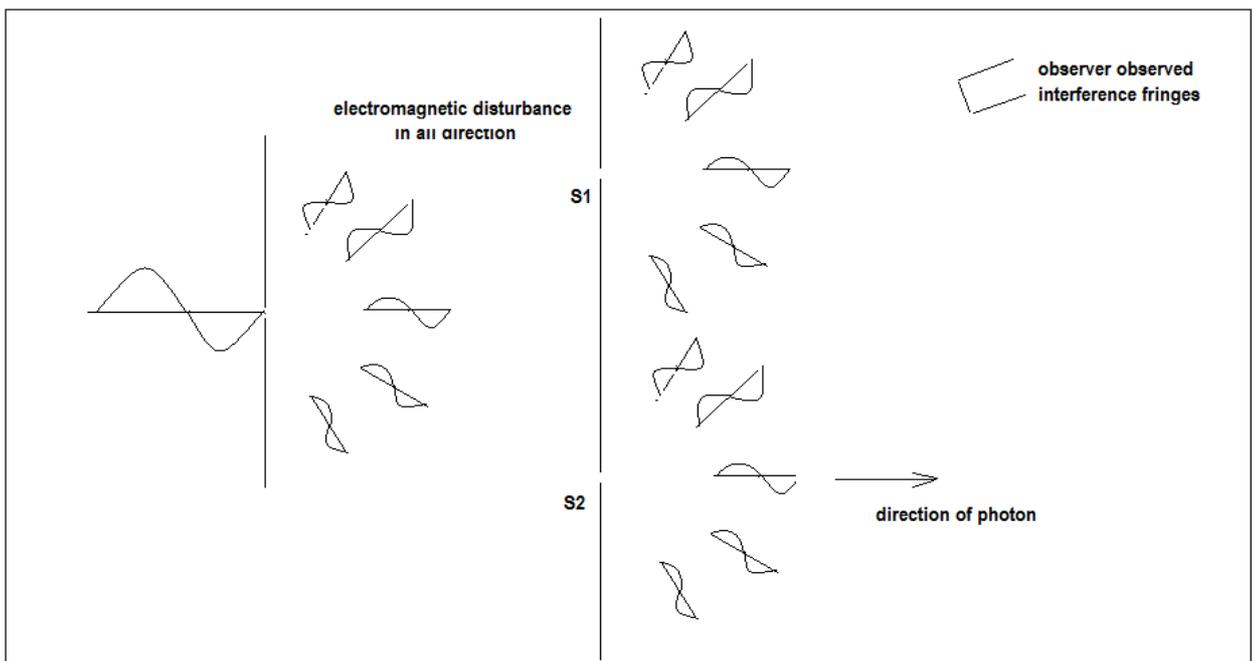
Polarization: - Photon is much smaller than electromagnetic flux around it & generally it is non-polarized in nature but due to grating geometry of crystal. This vibration of electromagnetic flux can be changed. This is due to internal vibration change of energetic particles. By passing light through proper medium, we can change polarization of light.

In Additional dark matter which is explain below this <mark>wave nature is absent</mark> because it is made up of only two +ve & -ve energetic particles. Both energetic particles behave independently to form basic stable structure of world. This is called additional dark matter of the universe.

<div align="center">ADDITIONAL DARK MATTER</div>

This matter is the origin of all matter in universe. This matter is simplest matter made by this two +ve and –ve energetic particles. In this matter all the energies like E gravi, E charge, E mag, E kin is well balanced in very small space as explain below.

In this matter two +ve and –ve energetic particles revolving around their mass center like binary stars
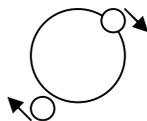
Attraction between +ve and –ve charges form force toward center and velocity form to balance kinetic energy to balance elementary energy equation

M C^2 = E charge + E mag + E kin + E pot

form force against that attraction force. (centrifugal & centripetal forces)

As both particles are just antiparticles of one another. Magnetic field formed by one +ve particle is canceled by other –ve particle. Charge field formed by one +ve particle is canceled by other –ve particle and motion of both particles is suppress in limited small area due to their circular motion. In this matter both energetic particle expresses all their energies in very small space only.

This matter is well balanced. All energies are well balanced in limited small area. There is no resultant radiation by which matter is detected, no resultant magnetic field, no resultant charge field, no resultant motion and size is so small that this matter can goes through other matter undetected. Only detected term is its gravity, which is also too small.

Author thinks this matter remains everywhere in universe undetected and as this is very simple structure its quantity is more that other matter in universe. This is already a proved concept. This may be revolving around earth, sun and galaxy undetected because this is dark matter. As this matter is spread everywhere its **resultant** gravitational effect also remain undetected.

This matter may present in deep space as big revolving cloud but remain undetected as radiation from other object goes through it undisturbed. Size of this **particle is much smaller than even photon** but no resultant motion or radiation.

This is first very stable state of matter. So, quantity of this matter is much more in universe.

| Other matter	Additional Dark matter
1) Absorb & discharge electromagnetic radiation.	1) This matter is most stable matter & not interacts with any radiation.
2) Made up of elementary particles, which are made up of energetic particles.	2) Directly made up of two independently revolving energetic particles. So, very simple structure & Quantity of this matter is much more.
3) Any matter cannot move through other solid matter.	3) Particle size of this matter is so small that it can easily move through any solid matter.
4) Molecules of matter interact with each other & bond is form between these molecules to form matter.	4) Every particle act independently. There is no interaction or bond between two particles. Even single particle will float independently.
5) This matter is visible matter.	5) Only gravitational effect is visible.

Black hole: - In black hole mass of star get compressed in very small area. First matter formed by compression is high-density matter. When due to high gravity this state of matter also get collapsed & only state of matter remains is dark matter. In this dark matter very high energy is well balanced in very small area. Author thinks that main matter in black hole is dark matter where very high energy get store in very small space.

Big bang: - This dark matter is also getting crushed due to very high gravity. This is formed when all the matter of the universe accumulated at one place. This is the

time before big bang. Where all the energies well balance in small space & these energy is suddenly get release in one stroke as charge burst when this dark matter get collapsed & then the very high explosion occur. This creates big bang effect.

NATURE OF ATOM

NUCLEUS: - it is made up of protons (P) and neutrons (N) and lot of elementary particles. Its picture at every moment is changing. Proton changes to neutron and neutron changes to proton and flying elementary particles moving from one another are replaced by other. It means for instant picture of nucleus just like jelly because every nucleons are made up of energetic particles. This state is responsible for nuclear forces, which bind nucleus in one piece.
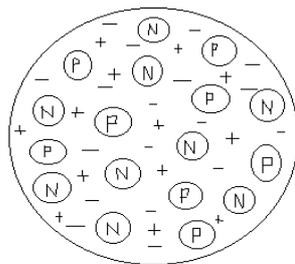
ELECTRON: - electron moves around nucleus in some fixed orbit. It is also made up of energetic particles but when any photon is added to electron. The numbers of energetic particles are also increases. We know for electron,

$$E = E\ kin + E\ charge + E\ mag + E\ pot = M\ C^2$$

When photon is added. Mass M changes from M to M + dm but here, E charge, E mag & E pot remains constant only changeable energy is kinetic energy, so when photon is added only kinetic energy of electron increases & it jumps from lower orbit to higher orbit. In reverse case same thing happens in reverse manner.
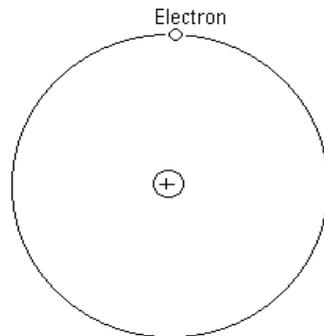
SOLUTIONS OF DIFFERENT PROBLEMS

1) WHAT IS MEANT BY HEAT ENERGY?

Temperatures of substance (heat energy level) depend upon, how much electrons are excited in atom of substance? Electrons get excited when it gets more energetic particles (by this theory). Means, heat energy of any body depends upon number of extra energetic particles that do exits in that substance.

At 0° A (absolute) electron of substance get sufficient numbers of energetic particles. But as temperature increases, numbers of extra energetic particles in electrons get increases. So, radiation of those extra energetic particles from electrons is always going on in the form of photons. At the same time, electrons also accept photons from other radiation.

So, in case of electron, accepting and giving out photons is always going on. So, temperature of substance is only constant when rate of energetic particles accepting and going out (in the form of photons) is equal.

Now, we get actual picture of thermal energy and its translation i.e. when we heat any substance, we only give extra energetic particles in the form of photons to that substance. For example, when we supply heat by burning coal. At that time, we supply photons emitted due to chemical reaction between Carbon & Oxygen to heating substance. Vibration of molecules is effect of extra energetic particles in electrons of the substance.

2) IF PARTICLES LIKE TACHYON ARE IN EXISTANCE THEN HOW DOES IT HAVE VELOCITY GREATER THAN LIGHT?

This can be proved by this theory. We know for any particle.

E kinetic = M C^2 – (E charge + E mag) -----------(1)

If Tachyon have cumulative spin & vibration of energetic particles then

E kinetic = E linear kinetic + E angular kinetic (due to spin & vibration)

But if M is mass & V is velocity then,

E kinetic = ½.M .V^2 + E angular kinetic ---------(2)

From (1) & (2)

½.M.V^2 = M. C^2 – (E charge + E mag + E angular   kinetic)

But if   (E charge + E mag + E angular kinetic) $<$ ½.MC^2

Then,   ½.M.V^2 $>$ ½.M. C^2

SO,   V > C

3) IF IN NATURE FOLLOWING TYPES OF REACTIONS ARE GOING ON
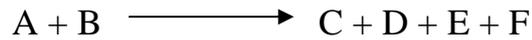
Suppose proton & proton get collide

$$P + P \longrightarrow P + P + P + \bar{P}$$
$$P + P \longrightarrow P + P + N + \bar{N}$$
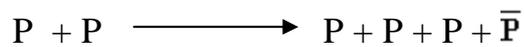
And when P & N collide

$$P + N \longrightarrow P + P + \bar{\pi}$$

$$P + N \longrightarrow P + N + \pi + \overline{\pi}$$

Such reaction can be explained by this theory. In any reaction

$$A + B \longrightarrow C + D + E + F$$

Total energetic particles before reaction = total energetic particles after reaction

So, $Ma + Mb = Mc + Md + Me + Mf$

Or, $Ma.\, C^2 + Mb.\, C^2 = Mc.\, C^2 + Md.\, C^2 + Me.\, C^2 + Mf.\, C^2$

i.e. total energy before = total energy after reaction --------------(1)

Also, in reaction number of extra +ve or –ve energetic particles remains same. So,

Extra +ve or –ve   Extra +ve or –ve

Charges before reaction   =   Charges after reaction ----------(2)

Both equations are always true in any reaction between two elementary particles. For example,

$$P + P \longrightarrow P + P + P + \overline{P}$$

Here, total energy before = total energy after and

Total extra +ve charge before = total extra +ve charge after

4) As energy is the capacity of doing work, how can we explain explosion of
   atom bomb or hydrogen bomb?

                   In case of atom bomb or hydrogen bomb, matter of mass M
changes to the particles of radiations whose total energy is equal to MC^2.

(Energetic particle may be formed by small high repulsive field surrounded by
very high attractive field & then general fields like gravity, +ve or -ve charge
field. Repulsive field at centre gives elastic nature to particle; attractive field
gives nuclear forces & binding forces to particle. General Fields like gravity &
charge fields gives a tool by which energetic particle expresses our self in the
world.)

                        For other details refer paper on www.maheshkhati.com

FORCES IN SPECIAL THEORY OF RELATIVITY MAKE SPECIAL THEORY OF RELATIVITY WRONG

CALCULATION 1:- FORCE WITHOUT ACCELERATION, ACCELERATION WITHOUT FORCE & APPLIED FORCE IS LESS THAN ACTING FORCE IN SPECIAL THEORY OF RELATIVITY.

STEP 1:-This problem can easily be understood by following paradox.

{Before starting this paradox, I want to put one relativity formula's given in standard book of relativity for example "Page no. 135 of Elements of special relativity" by Dr T.M. Karade, Dr K S Adhav & Dr Maya S Bendre.

In any frame, for force in X-direction by S.R.

$$Fx = d/dt(y.\ mo.\ ux)\ \text{where}\ y=(1-u^2/c^2)^{-0.5}$$

So, after differentiation

$$Fx= y.\ mo.\ (dux/dt) + y^3.\ mo.\ \{ux/c^2\}.\ (u\ .\ du/dt)$$

$$Fx= y.\ mo.\ ax + y^3.\ mo.\ \{ux/c^2\}.\ (u\ .\ a)\ -----(A)$$

We know, $u^2=ux^2+uy^2+uz^2$

So, after differentiation

$$2\ u.\ (du/dt) = 2.ux\ (dux/dt) +2.uy\ (duy/dt) + 2.uz\ (duz/dt)$$

$$2\ u.\ a = 2.ux\ ax +2.uy\ ay + 2.uz\ az$$

$$u.\ a = ux\ ax + uy\ ay + uz\ az\ --------(B)$$

from (A) & (B)

So, Fx=y. mo. ax+y^3 mo. (ux/c^2} (ux ax+uy ay+uz az) ------(1)}

Now, Paradox:-

On frictionless platform, object is moving with constant velocity ux in X-direction & only magnetic force is acting in Y-direction & there is **acceleration in Y-direction only with velocity uy** & Fz=0

If we apply eq(1) to this case then result will be

$F_x = y^3$ mo. (u_x/c^2) u_y a_y ---------- as $a_x=0$

Or $F_x = F_{ay}$ as this force is form due to 'ay' only

Mean's even there is **no magnetic force** acting on object from outside in x-direction & no 'ax' then also **above force will act on object in +ve direction of x-axis due to 'ay'**

Important point (1):-

Mean's <u>applied magnetic force</u> **on object in X-direction is 0 &** <u>acting force</u> **in X-direction is** $F_x = y^3$ mo. (u_x/c^2) u_y a_y+0 or F_{ay}+0=F_{ay}

STEP 2:-Now, Force acting in X-direction is $F_x = y^3$ mo. (u_x/c^2) u_y a_y or F_{ay}

Now, after this happen, very small magnetic force of same intensity

-fx = -y^3 mo. (u_x/c^2) u_y a_y or -F_{ay} start acting on object in direction opposite to above force (but velocity is still positive ux) & cancel that above force.

Mean's equation (1) becomes

$0=y.$ mo. a_x+y^3 mo. (u_x/c^2) $(u_x a_x+u_y a_y)$

Or $0 =y.$ mo $a_x.$ $(1+ y^2$ $\{u_x^2/c^2\}$) +F_{ay}

(Here as $F_{ay}= y^3$ mo. (u_x/c^2) u_y a_y)

Mean's $F_{ay} = y.$ mo. $-a_x.$ $(1+ y^2. \{u_x^2/c^2\}$)

Mean's there must be acceleration in –ve X-direction to fulfill above equation of S.R.

Now, see above equation carefully, it is of nature

$0= -f_x + F_{ay}$

Important point (2):- Mean's <u>applied magnetic force</u> **on object in X-direction is -fx &** <u>acting force</u> **in X-direction is -fx + F_{ay} = 0 or 0.**

Here, resultant force in X-direction is zero but there is acceleration.

STEP3:- same things happen for +ve force in X-direction (for less than F_{ay} or more)

Now, I am generalizing above result.

Step 1 & 2 clearly shows that when we apply any magnetic force (Fmx) in X-direction on the object, actual force acting on object is more & that quantity is (Fmx+Fay)

Similarly,

If we apply any magnetic force (Fmy) in Y-direction on the object then actual force acting on object is more & that quantity is (Fmy+Fax)

This is completely complicated results, which says that applied force & acting forces on objects are different & more in S.R.

STEP4:- Force does work, consume energy, gain energy & we must know that energy cannot be created. It can be transferred only:-

From above setup it must be clear that energy get transfer from magnet to object but if applied force is less than acting force then energy gain by object will be more than energy loose by the magnet. Means due to more work done by more force for same displacement, more energy get generated.

HERE, more energy (& force) is the problem.

Where this additional energy (or force) does comes from?

There is no answer in S.R. for this problem.

THIS MATHEMATICS PROVES THAT THE S.R. IS COMPLETELY WRONG:-

In S.R., force is not related to change in the state of motion or acceleration as Newton consider but with change in moment.

So, even I move towards falling ball,

$fx = y^3$ mo. (ux/c^2) uy ay -------- this force will act on the ball.

CALCULATION 2 :- MATHEMATICS WHICH PROVES THAT CONSUMPTION OF ENERGY IN DOING WORK DECREASES AS RELATIVE FRAME VELOCITY INCREASES:-

$$F'_x = F_x - \frac{\frac{V}{c^2}\left(F_y v_y + F_z v_z\right)}{1 - \frac{V v_x}{c^2}}$$

$$F'_y = \frac{F_y}{\gamma\left(1 - \frac{V v_x}{c^2}\right)}$$

$$F'_z = \frac{F_z}{\gamma\left(1 - \frac{V v_x}{c^2}\right)}.$$

ARE TRANSFORMATION EQUATIONS OF FORCES IN S.R.

Let consider that old man A pull the cart B from pole 1 to Pole 2 on platform by standing at pole 2 with rope of length AB. Observers are on platform & in the train moving with velocity V then

1) When AB (displacement) parallel to the direction of train velocity.

  Then, for observer on platform:-

  so, Fy = F z = 0   , dx =L(AB)=length of rope which has to be pulled

   Fx= tension in rope

 & Work done W = Fx . dx ----------(1)

  for observer on train :-

  F'x = Fx – (v/c^2 . Fy. Uy)/(1-V .Ux/c^2) = Fx as Fy =0 by force transformation equation of

S.R..

Here, as one meter in X- direction in S-frame is equal to 1/ γ meter in S'- frame in X-direction

  & dx' =L(AB)' = dx/ γ where γ = (1-V^2/C^2) $^{-0.5}$

 So, W' = F'x . dx' = Fx . dx/ γ = W/ γ

 So, W' = W/ γ

Case 2 :- When AB perpendicular to velocity of train

  for observer on platform :-

$Fx = Fz = 0$ $dy = L(AB)$ $\&$ $dx = 0$

$Fy =$ tension in rope

Work done $W = Fy. \, dy$

for observer in train :-

$F'y = (Fy/ \gamma) / (1 - V \cdot Ux/c^2) = Fy/ \gamma$ as $Ux = 0$

$\&$ $dy' = dy$ as it is perpendicular to V $\&$ $dx' = dx/ \gamma = 0$

Work done $W' = F'y. \, dy' = (Fy/ \gamma) \cdot dy = W/ \gamma$

$W' = W/ \gamma$

Case 3:-Consider that old man pull the cart on platform from pole 1 to pole 2 in any direction

Fx, Fy, dx, dy are tensional forces $\&$ rope get pulled on the platform in X $\&$ Y direction then

For observer on platform:-

Work done $W = Fx.dx + Fy \, dy$

For observer in train :-

$F'x = Fx - (v/c^2 \cdot Fy. \, Uy)/(1 - V \cdot Ux/c^2)$

$F'y = (Fy/ \gamma) / (1 - V \cdot Ux/c^2)$ ---------from transformation equation.

$W' = F'x.dx' + F'y \, dy'$

$W' = \{Fx - (v/c^2 \cdot Fy. \, Uy)/(1 - V \cdot Ux/c^2) \} \cdot dx' + \{(Fy/ \gamma) / (1 - V \cdot Ux/c^2) \} \cdot dy'$

Here, as one meter in X- direction in S-frame is equal to $1/ \gamma$ meter in S'- frame in X-direction

So, $dx' = dx/ \gamma$ $\&$ $dy' = dy$ $\&$

If $m = (1 - V \cdot Ux/c^2)$ then

$W' = (1/[m. \, \gamma]) \cdot \{Fx \cdot dx - (Fx. \, V/c^2 \cdot Ux. \, dx) - (Fy. \, v/c^2 \cdot Uy. \, dx) + Fy.dy\}$

$W' = (1/[m. \, \gamma]) \cdot \{Fx \cdot dx(1 - V \cdot Ux/c^2) + Fy \cdot (dy - v/c^2 \cdot Uy. \, dx) \}$

$W' = (1/[m. \, \gamma]) \cdot \{Fx \cdot dx(1 - V \cdot Ux/c^2) + Fy \cdot dt \, (Uy - v/c^2 \cdot Uy. \, Ux) \}$

W'=(1/[m. γ]) .{Fx .dx.(1-V .Ux/c^2) + Fy . dt .Uy. (1-V .Ux/c^2) }

W'=(m/[m. γ]) .{Fx .dx+ Fy . dt .Uy}

W'=(m/[m.y]) .{Fx .dx+ Fy . dy}

W'=1/ γ.{Fx .dx+ Fy . dy} = 1/ γ . W

Or W'= W/ γ

This clear shows that in all cases W' = W/ γ

 Means' dE' = dE/ γ

This shows that as velocity V increases, energy consume in doing work decreases. This is against

relativity because by mass & energy equivalence, energy has to be increase as mass increases.

We know that the definition of energy is the capacity of doing work. This proves that

capacity of space holding energy decreases as frame velocity increases.

This happens because Force perpendicular to V decreases & space get contracted in direction of

V.

CALCULATION 3:- *Relativity is so wrong. It can be proves that there can be*

acceleration without force again.

Example is given below

In prime frame, if Fz =0 & ratio Fx/Fy is equal to (v/c^2 . Uy)/(1-V .Ux/c^2) then

after transformation in S' frame F'x becomes F'x = 0 because

F'x = Fx – (v/c^2 . Fy. Uy)/(1-V .Ux/c^2)   ----transformation equation in relativity

In frame S :- Now, just consider that on magnetic substance on frictionless

platform magnetic forces are acting in X-direction & in Y-direction. Magnetic

force Fx is so adjusted by software program that ratio Fx/Fy is always equal to

(v/c^2 . Uy)/(1-V .Ux/c^2).

Then, Forces Fx (very small) & Fy in this frame will create acceleration ax & ay in direction x & y.

Observer frame S' is moving with velocity V with relative to frame S then in frame S' :-

There is acceleration in X' direction because $ax'= ax/\{r^3. (1-ux. v/c^2)^3\}$

where $r =1/(1-v^2/c^2)^{0.5}$ but there is no force in X'- direction because

as $F'x = Fx – (v/c^2 . Fy. Uy)/(1-V .Ux/c^2)$ & as

$Fx/Fy=(v/c^2 . Uy)/(1-V .Ux/c^2)$

So, $F'x =0$

Means, in this case in frame S' there is acceleration in X'-direction but no force is present in X'-direction.

Means, some ghost force will accelerate substance in direction X' in frame S'.

Can you call this as physics?

If Ux is more than V then in this frame there is +ve velocity & acceleration in X' & Y' direction.

In frame S', if I apply equation (1) i.e.

F'x=y. mo. ax'+y^3 mo. (ux'/c^2} (ux' ax'+uy' ay') ------(1)

 These will gives completely opposite result which says that if ax' & ay' are in existence then F'x cannot be zero.

Means, one equation of S.R. says that this is possible & other equation says that this is just impossible.

These calculations 1,2 & 3 shows that special theory of relativity is wrong.

For other detail refer paper on www.vixra.org/abs/1611.0096 or paper on www.maheshkhati.com