

The Eternal Original Fundamental Particle of the Universe

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Abstract: Till now, There are found four fundamental forces in the Nature/universe. They are, (1) Gravity, (2) The Weak Force, (3) Electromagnetism and (4) The Strong Force. But, since 2000, thinking on the most original, eternal, fundamental particles, it is found by the author through meditation of octo-microscopic nature, (1) self-conscious, (2) Intellect, (3) Mind, (4) Space, and Principle Properties of each of the following, (5) Air, (6) Light, (7) Water, (8) Earth; from the Modern Science and the Hindu Philosophy particularly, ShriMadBhagWadGeeta. that, there must be some fundamental ever existing original particles as building blocks of the Nature, the Universe. Yethakashashthito nityam Vayuh... means as there is air always attached to space, all objects and events in the universe are attached to the space. Space is also self conscious as per the Geeta. The Dark Energy matter in astronomy corresponds to the Vayuh in Geeta. Something moving is energy, Dark photons, always in motion in space is energy and that's the Dark Energy in space. The particles of the Dark Energy are named 'Dark Photons' by the author. These particles represent all above fundamental four forces of the nature and also the properties of mass, electricity and magnetism, And a mesh of neutral field lines which, assume any field according to respective particles coming into existence in space-Domains. It is Idol Ganapati who presented all these Principles, First ever known and worshipped in Hindu-Aryan culture. All each of the Bosons like Higgs Particle are constituted from combining the fundamental particles into respective bunches.

Keywords: Fundamental Forces, Dark Energy, Dark Photon, Strange G.

1. Introduction

The world is hunting for the foundation blocks of the Universe. In this hunt, it has found till now, 12 numbers of Fermions (matter particles, out of which 6 numbers are Quarks and 6 numbers are leptons. Further, it has found 5 numbers of Bosons . Still recently predicted X_{17} Boson is searching place for it in the Standard Particle model. Still one singular, unique particle has not proved its place in the Standard model chart of Particle Physics. And it is here presented in this original paper. It is the Dark Energy Particle named 'Dark Photon.' It is proved by trapping it in Bose Einstein Condensate and in specific crystal. Its particle nature is also found in Max Plank's Black Body Radiation experiment. Single particle of light of mass 4.132×10^{-15} eV is dug out from Einstein's mass to energy conversion and Plank's formula for Black Body Radiation. After viewing it from all sides; it is proved theoretically that, it is the fundamental singular the smallest particle in nature, which exhibits gravity in 'bending of light', particle nature in W & Z boson and neutrino decays, it exhibits the origin of strong force in gluon in it.

2. Discussions

The particle is derived from the Einstein's formula for transforming atomic-internal energy to radiation energy, that is $[E=mc^2]$ and Plank's Blackbody Radiation formula $[E = hv]$ and the mass of matter contained in single wave works out to $7.3725197277 \times 10^{-51}$ kg that's equal to 4.136×10^{-15} eV. These fundamental particles accept the field properties of whatever cause of its respective field. Plank found Minimum quanta of radiation energy equal to 4.136×10^{-15} eV. It is the Dark Photon.

From these relations, the fact being stated is that, when a mass of $7.3725197277 \times 10^{-51}$ kg moves at the speed of light

with respect to us, it posses energy equal to $mc^2 = 4.136 \times 10^{-15} \times c^2$ eV or equal to $6.626070040 \times 10^{-34}$ J.s That's the Magnitude of Plank's constant. It is the elementary energy Quanta.

The newly dubbed particle X_{17} by, the Institute of Nuclear Research in Hungari, ought to be made up of Dark Photons. In these particles like X_{17} , Higgs Boson etc. the Dark Photons are not bonded by gluons as they are bonded in quarks by Gluons. Model of Particle Physics suggests that, all the matter in Universe is composed of just 12 elementary particles: six Quarks and six Leptons. They interact by means of the four fundamental forces; the strong force acts on Quarks; weak force, electromagnetic force; these three forces are included in the Particle Model; the forth force of Gravity being very small is neglected in the Model. But, the original fundamental basic particle of the materialistic universe is Dark Energy. Moving mass is energy; hence Dark Energy contains very fundamental original eternal masses, filled in space. Moving Dark Particles, named as Dark Photons, constitute 68 % of Dark Energy out of 100 % of total energy in the universe. These Dark Photons are seen in Plank's Black Body Radiation. Then, they are experienced in space-lensing. They are harnessed in Bose Einstein condensate. Higgs Boson and whichever particle decay they release Dark Photons as radiations. In nuclear reactions the energy released or absorbed is carried by the Dark Photons. These particles have rest and relativistic mass same; because, energy transmission phenomena is transfer of these moving Dark Photons from source to the receiver. Therefore, in the process of energy transfer as speed of moving object increases, it means it receives or accepts Dark Photons from the source. Thus, The Dark photons are the basic original eternal particles, the building blocks of the Universe. They have mass; because light is bent passing by the Sun. Each photon bares electric +ve and -ve poles. So the Dark photons are carrier of electric charge. The Dark

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Photons form all types of Quarks, They posses gluon. They always spin around themselves at peripheral linear velocities $c+$; therefore, they give birth to electricity to oppose their linear motion in spinning around self; and prevent to exceed c . Magnetic field is secondary field born from electric field. To combine it creates gluons when two Dark Photons smash against each other at speed greater than c w.r.t. each other they omit Gluon and get slicked to one another, consequently forming bigger particles called elementary particles. Gravity is unidirectional force. Hence, there cannot be anti-gravity. Thus, all universal properties are concentrated in Dark Photons. Therefore, the cause of expansion of the universe is not antigravity. There must be 100 % and more and more dense dark photons deep in the universe, in all directions around the universe. Its gravity is

acting from all directions on the universe; and, that is pulling the Universe apart away due to its big gravity acting on universe from outside. Thus all matter, baryons and Dark Photons will be all rolled down from the universe creating real vacuum in the space domain of the existing universe. That, vacuum will then create deceleration in the flying away universe from its domain space, converting into dark photons' energy in motion. At last at a point the dark photons will start flowing reverse and rushing in the pure vacuum of evacuated space domain of the just previous universe; the dark photon winds creating whirl pools like vortices and smashing against each other; and, resultantly, creating very elementary particles the Quarks. Question remains, why the particular size of the Quark? Please see the figure-1 below.

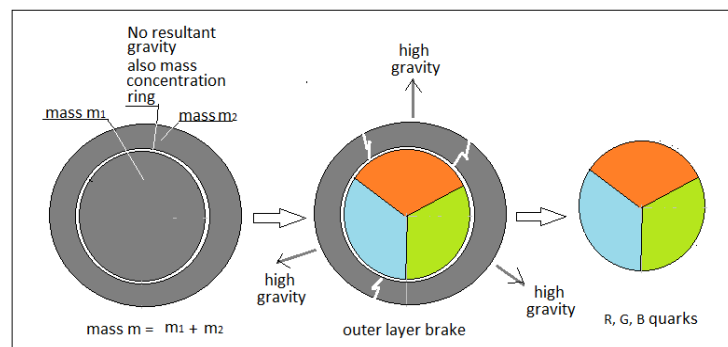


Figure 1

Birth of Quark

A globe of mass m contains contain mass m_1 inside the globe of mass m_2 . Radius of mass m_1 is $2/3$ rd of mass m . There is a thin sphere in between m_1 and m_2 where at net effect of gravity is nil. The same thing exists with the inside sphere of mass m_1 this phenomena continues, till the thickness of the intermediate thin skin sphere becomes less than the effective distance between the spheres; one inside the other. Tthe dark photons at surface of both the spheres interfere in each of others effective distances; and there the phenomena of existence of null resultant gravity stops, The final inside globe then forms the elementary, the very basic fundamental particle Quark. All above matter-Spherical covers do crack and dissolve in Dark Energy. It all takes place under the collisions of dark photons rushing in empty and real vacuum space domain of the just previous universe.

It is the wrong assumption; that, all the mass in the universe can collect in a tiny slice of fraction of a millimeter at infinite density. But, as we go inside the mass towards its center more and more, its gravity goes on decreasing. It is zero at center; but, not only that, the zero resultant gravity condition exists at every $1/3$ of the radius from surface towards center of the mass-sphere. Maximum mass concentration is in Quarks. How it happens; is explained here, with the help of Figure-2 below.

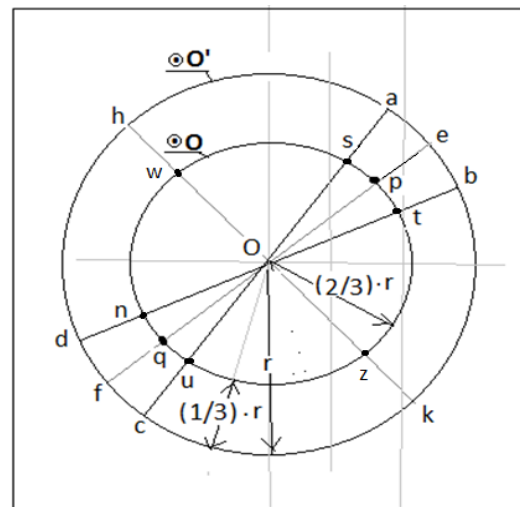


Figure 2

Resultant Gravity Nil Sphere Shell

In the above digram-2, in the spheres represented by sphere O and the in the space between sphere O and sphere O'; there is homogeneous same mass filled in with the same density. In discussion we will call them circles. Circles O and O' are similar and their centers are coincided. In the triangle O a b [O e=r the radius; Op= $(2/3)$.r and pe= $(1/3)$.r]. The line s p t divided the mass in triangle equally in two halves O s t and a b s t. Point P is the mass center of the triangle O a b. Please understand that, we have taken a thin slice of the sphere O'. the points p and q, are stable under the gravitational forces due to equal and opposite equal masses on each of the two sided of themselves; the triangular like portions O a b and O c d equal to each other and opposite to each other are stable w.r.t. each other under gravity force of

each acting on the other and each of this triangle pair is stable under the gravity forces acting on them due the remaining mass on their both sides in the slice. By rotating this slice, through 180° around any diameter of the slice; the original sphere will be described; such that, There will be sphere O, inside sphere O' at the depth of $(1/3)r$ where r is the radius of the outer sphere O'. The surface of sphere O, represents a thin surface empty sphere of concentrated mass in sphere O'. At this surface, represented by circle, w p z q, which is ultimately the surface of the inside sphere O, the gravitational force acting from inside mass of the sphere and outside mass of the sphere act at each point of the surface in opposite direction to each other. Thus, on the surface of the sphere O, there is not resultant gravitational force due its own mass of sphere O'. It doesn't mean there is not gravity there. There it is but, acting equal and opposite. Therefore, Sufficient external force on the sphere O' can break the outer mass to inner sphere O. Then after the sphere O works like sphere O' as shown in figure-2 above. It goes on serially till the inner sphere surface and outer sphere inner surface unite with each other or, the particles on both these surfaces come in effective zone of each others.

As per HST observations in 1998 of very distant supernovae showed that, a long time ago, the universe was actually expanding more slowly than it is expanding now. Definitely, it must be due to that, that time the universe was more contracted; and, the internal gravity therefore, must be more than, as it is now. And here is a point! If the Dark Energy were anti-gravitational, the expansion rate of the universe would have been higher than it is now. Because if it were not so, the density of the Dark Energy would have been decreased, till now since then. Hence, there is not anti-gravity property attached to the Dark Energy. Hence, the universe is expanding due to gravity of the Dark Energy particles named Dark Photons, spread all around the universe in all directions up to infinite distances away.

It is sure that, there is, Dark Energy carrying Dark Photons beyond the universe as mentioned above. If it were not so; then, the universe would not have come into existence at all. Because, the Dark energy matter, from which this universe is formed; it would not have in space domain of the universe. It would have spread throughout the whole infinite cosmos. The property of Anti-gravity attached to Dark Energy is merely illusive. 'Moving fundamental mass particles called, Dark Photons having corresponding gravity is energy'; and, it is the Dark Energy. The Second point is that, as the Dark Energy is filled throughout the whole infinite cosmos, there could occur the probable synchronization of to and fro motion of Dark Photons in abundance to create moving whirl-pools and their collisions, creating the universe's stuff-matter to form it. Thus, that cause of expansion of the universe is the existence of Dark Energy in all directions up to infinite distances in the infinite cosmos throughout the whole cosmos to say, in all multi-verses and inter-spaces between them. The dark energy Photons individually each whirling in micro-domain space, which are present beyond the universe are considered rightly as stationed at their positions w.r.t. each other. Their forces are pulling out the universe's galaxies etc. and the Galaxies in the universe are tied by flexible bands of gravity in between all of them. Therefore, There is existed a force

down-gradient from the edges of the expanding universe towards inside of the universe.

Einstein called it one of the space property. But, it is also an assumption; not a reality. Space has only one and one property only. Space provides accommodation to each and every particle, object and what so ever; that's all. There is not any mystery in expanding universe. Excuse me, **The Science needs belief in itself and its scientific pure logical thinking.** 'Pure logical', in the sense; there is not any virtual imaginations.

As we would be able to detect Baryonic matter by verifying absorption of radiations passing through it; why can't we believe Dark Energy from the gravitational behavior of it in bending light and gravitational lensing. So also why can't we believe from bending of light that, light is of pure particle nature and the particles are the Dark Photons moving at velocity c. These are the clear evidences of existence of Dark Energy as detailed above. It was me who denied first ever that Dark Matter is not antimatter. The Science world should give me honor as credit for it.

From the practical observations recorded on Hubble Site; there is much space to conclude that, the Dark Energy matter, the Dark Photons concentrate at and around more gravity space. Therefore, large gravitational lenses are at galaxy's cluster and micro gravitational lenses at individual stars. As per Press and Astronomy News on **February 5, 2015**; Dark matter doesn't emit or absorb light of its own. So we can't observe it directly; it confirms in a way that, the light photons are 68% dark energy's Dark Photons. A neutrino, that strays close to a neutron can turn the neutron into a proton while the neutrino becomes an electron. In the four fundamental forces Neutrino is constituted from Quarks. W and Z bosons are constituted from fundamental, original eternal particle Dark Photons by their assembly of millions and millions numbers under certain situation. There is not gluon to hold these particles bundled. Therefore they decay. The smallest neutrino mass is also much greater than the mass of the Dark Photon. The mass of light photon is very near to 4.132×10^{-15} eV when it is moving at velocity c. When the Dark Photons are stationary, whirling in each one's micro-domain space in line w.r.t. the source of any field; they become that particular field. When they bound in bunches without a glue, they form Bosons. When they bound in bunches by means of Gluons; they become elementary mass particles. And the minimal mass of smallest neutrino is of the order of 10^{-13} eV.

Again I repeat; all particles' masses in the universe are made up from Dark Photons. The elementary particles are also formed from the Dark Photons binding them by gluons, binding the Dark Photon to photon forming quarks, further bonding different Quarks to form electrons, protons, neutrons. Dark Photons also create W and Z bosons by just collecting Dark Photons with the help of each of themselves by means of the most original force with them like gravity force. In fact, it is the Higgs field in origin. The Higgs particle is formed from these Dark Photons by binding them by themselves. Newly detected χ_{17} particle is also formed from Dark Photons. The force with the Dark Photons is micro gravity. The Gluon is generated from them. When,

number of Dark Photons, collide heavily against each other, the Gluons are generated. And electrical matter also is generated by these Dark Photons when they speed up to speeds $c+$; to oppose their velocity beyond c w.r.t. its energy imparting source and observer attached to the frame of the source. In different experimental observations we feel the existence of these Dark Photons truly. These Photons are caught in Bose Einstein Condensate by scientist Hau and in the crystal at Cambridge University London. They are force particles. When not entangled with each other or with another, they remain in motion always. If entangled as in Bose Einstein Condensate to stop a while; till the entanglement exists they remain stayed. Soon the entanglement vanishes, they return to their state of motion. These Dark Photons are energy carriers also. They always remain in motion in free space representing 68% of universe's energy. When, in motion they possess their energy in kinetic form and when they are in entangled form, they possess it in energy due to position or the energy due to state. When the light photons are directed towards the Bose Einstein Condensate (BEC), they are blocked in the Ghost Atom. The light photons in the dense cloud of electrons are caught. There the light photons vibrate to and fro inside the Ghost Atom's electron cloud of orbiting electrons. The orbiting electrons' cloud is rotating at micro-speed around the big nucleus of the Ghost Atom. And in this circular motion the light photons slip from, the rotating radial plane of electrons, keeping its original direction and remains vibrating when in the electron cloud of the Ghost atom at speed c . Observer finds that light is stopped, but, the light photons remain vibrating/whirling inside the orbiting electrons at micro-speed. The light photons maintain their direction in the Ghost atom. When the electron plane aligns along direction of motion of the photon they just fly away the BEC chamber at speed c . In case of the crystal also, similar event occurs. When these photons are in free space, they hold their energy in whirling around self position in free space in small micro-domain space each. To hold a field either gravitational or electrical or any other; they align according to the field lines of the field-source. Thus, any property, any particle, any mass, **manifestation of any in the nature; is executed by Dark Photons.** The manifestation of Bosons such as, Higgs Bosons, X_{17} and force carrying particles neutrinos; is from the Dark Photons. As the universe expands the Dark Energy density decreases. Therefore, the probability of the Terrestrial Bodies of random motion in the universe may increase. Therefore, the nature's inertial conscious increases the Dark Energy Density suitably. There is infinite Dark Energy matter in the cosmos outside of the Universe-Domain. That's all; it flows into the universe's domain. Destroyed Bodies in the universe, also transform their macroscopic masses into moving Dark Photons forming Dark Energy. Therefore, the density of Dark Energy remains constant in the universe all the time. The getting of different Bosons is like getting different pebbles. It is the fundamental particle of the universe due to which all the universe we see, we live in it, we transform in it, we work to elevate ourselves on materialistic level as well as on spiritual level, trying to maintain life forever in the universe; though we may have to change our planets with either suitable or by making suitable conditions there for us. Due to expansion of the universe, individual constants belonging to different systems may

change; but, combined magnitude of the constant with other it's connected constant will be eternal constant; as it is with constants c and t which change w.r.t. different frames in relative motion w.r.t. each other, but, 'ct' doesn't change w.r.t. different frames in different states of motions. Under varying conditions of speed and relative position of observer c and also t vary. But, their variation is linked with each other by inverse proportion to each other. Therefore, 'ct' is the universal eternal constant. (Special Relativity With Einstein 2015, by this author, Free-eBook.net, also downloaded on Gramin Polytechnic Vishnupuri Nanded) Therefore, If there is any fifth force, that is of Dark Energy Particles Dark Photons; that force is strange force. The particle is very original fundamental particle, the building block of the universe. It is just the weakest gravitational force with each Dark Photon Particle. I name it '**Strange G**'. It means Strange Gravity Force in physical science and at the same time it means, Strange Ganapati's Force in Spirituality. Ganapati is the first ever God worshiped by Hindu-Aryas. Its worshipped Idol includes all the eight original principles in the cosmos and the universe. Please peep in any new creation in the world; then, everybody is going to see a very tiny event as its cause. Thus, the 'Strange G' completes the Particle Model of the Universe particle Physics. Still better it will be to say that, the 'Strange G' initiated the world and hence it is to be placed at 1st place in the Standard Particle model chart. It shall stand at the first place in the Standard Particle Model; because, this Dark Energy particle photon 'Strange G' is Unique Singular Fundamental particle. Because this particle is the 'Building Block of the Universe'.

Standard Model Particles (nucleons included for comparison)						
Family	Particle	Predicted/ Discovered	Spin Number	Charge (e)	Colour	Mass MeV/c ²
Original Fundamental Particle	Strange G °	2015/2019	0	0+	0	4.597/c ²
↓	continued					↓

Dark Photons are always in motion at speed c w.r.t. each other. They do not give out their energy to other subject. They share it with other entities. Hence, the Dark Photons are always in motion. In energy transfer phenomena, they share their energy with other, keeping with the other themselves only. Therefore, as speed of an object increases its mass also increases. Thus, conversion of space into time or conversion of space-time into mass or reverse of both here mentioned phenomena are all apparent. Space, Time and mass, each one out of it is eternal. Whatever existence of in the Universe is now, it is due to their (Dark Photon's) combined existence as Quarks and further elementary particles. There in each Dark Photon maintains its energy intact and by sharing it with each other the Dark photons possess each of its energy in motion. Next, the Dark Photons are frictionless. They do not interact by means of any field. If they happen to act anywhere, they themselves involve directly there at. Therefore, in BEC, they do not give their energy to the Ghost atom but, remain in the mesh of electrons' cloud pushing it in its original forward direction. Soon they slip away from the cloud they fly away in free space at speed c . That's why the scientists could not think of the fact that, speed of light is not constant even at present. It changes w.r.t. the speed between the source of light and the

observer. It also varies as per changing gravity in space along the path of the light.

3. Result

In the study of Dark Energy, the Author found that, Dark energy has fundamental tiniest particles in different motions forming Dark Energy of the Universe. From all particles including Higgs Bosons etc. to all cosmic bodies are built up from these Dark Photons only. All mass particles as well as all Bosons present and those, would be revealed in future, all are made up from Dark Photons only. The force carriers are also made up from it. Literarily it is a strange particle and really the God particle. It is also eternal fundamental Gravity Particle. Hence **It is named as 'Strange G ' or may it be called "G" particle only.. It is requested to place it at the very beginning of the "Standard Particle Model" as given above. It deserves it.**

4. Acknowledgement

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