



# DARK MATTER BEYOND UNIVERSE.

**Dadarao Dhone**

Solo resesach worker, retd. EE(2005), Electric. & Mech., Hydro Projects; Teaching Faculty at Engineering Colleges (Private) at Naded, Parbhani (engineering and electronics and control and protection subjects to all disciplines), Public Scientist in Relativity and AstroPhysics (Theoretical), Shrimadbhagawad Geeta Self Studier; in Maha. State..

**1. Abstract:** Some years before, I have written that only simulations won't do, to draw the scientific results. Because, after all it works on the software basic mathematics based on our presumes. Once we have accepted that the world is expanding due to anti gravity of Dark Matter, our basic information for the super computer will be based on it. And as it works on 'cause and effect' principle, it gives the results as per the basic foundational input.

DESI is studying in deep the Dark Matter. But it is also following the above false Principle. Let it be. But, it should care of the results and analyse them searching contradictory points in their results. Definitely the results will indicate **towards truth**.

**2. Key Words:** Dark Matter, Beyond Universe, Elementary Particles Ga' Void.

**3. TEXT:**

**3.1 Discussion:** All are ignoring the mass involved corresponding to 'h' the elementary Quanta of energy presented by Dr. Plank. Again, Definition of energy is only that, moving (due to energy in motion, the kinetic energy) the most elementary mass particles or, it being capable to move (due to energy due to position, the potential energy).

Unless and otherwise, above two concepts are not accepted, we will be going wrong way developing false; developing some more mis-concepts in science.

A saturated liquid, under lower temperature will precipitated. Similarly, the Saturated mix of the Dark Energy particles, now 68% in the universe containing celestial bodies; with the Space, must have at its very initial like a saturated liquid of above said Dark Energy as if dissolved in space. Crystallized into visible Universe. May there had many processes, but, in a liquid they are there also due to Brownian Motion. So this thought logically fits well. Therefore, there, is the most fine Dark Energy (that 68% one) full of throughout the cosmos. Further this presumption makes possible, Multi-verses.

Mass, Space and time, this trio is the basic tool of the universe always existing eternally, forever. Mass needs occupy something. It is Space. Mass tresses space that time, something definite passes. That is time.

The mass is the very first entity, the very first element of the universe. And the very original mass is in the form of Dark Energy Particles of the 68% of the total energy of the universe. It is the most finest and smallest of all particles in universe.

At the first instant, when the scientists revealed the accelerated expansion of the Universe and the Dark Energy; to explain the accelerated expansion of the Universe, we have no other way to assign anti-gravity to the Dark Matter. But, then we have found that, though the universe is expanding, the Galaxies are hold as they are since long back. DESI has found Dark Energy Particles in all Galaxies it has observed. And we now say, the Dark Energy or its cause, the moving its particles, are hoding the structures of the Galaies. Once we say the DarkMatter has anti-gravity due to which, the universe is ekpandind and on other hand we are saying that the Dark Energy is holdig the Galaxies' structures. Therefore, there is Dark Energy out side the universe, in all directions of it, up to infinite distances. All Dark Particles  $h/c^2$  have gravitational force each-one. So the gravity of the Dark Matter, spread outside of the Universe as said above, must be the cause, of accelerated universe.

The most smallest elementary mass particle  $h/c^2$  named Ga by us; are in free space are not within their effective distances. When due to mutual gravity they concentrate in a space domain, they get cold welded to eacg other forming bigger particles of Dark Energy. They form Particles Clouds. Further when they come in each others effective distances due to their own gravities, they give birth to initial structure of the Star.

When anybody observes for Dark Matter or the Dark Energy; he must observe for these facts. May he assume them speculations or somethind else.

The particles Ga behave in eight manners. The Quark-gluon soup is made up of thse particles Ga. The Quarks generate protons, neutrons, serially atoms. Electrons are generated from Ga. Then atoms. Then molecules and big masses, like the earth. At Space in Galaxies, it behaves as fluid. There in the particles are just touching their effective distances regions of each other. Therefore, they behave as fluid. When in an atom, due to inside EM Field between orbiting electrons and protons in the nucleus, the Ga eached from the electrons, are ejected out in space at speed  $c$  travelling as light in free space. In free space they are present as a gas. Thus there are eight types of its behaves. All it is accommodated in space. As principle, these are the eight principles associated with Ga. The space itself must be its anti principle. The Space must be its anti particles. Please think seriously with pure logic. It is true. Now the scientists are thinking to unite Dark energy and the Dark Matter as a fluid. I think unifying some all in one is going to make to students a complex thing. They will not be able to understand all the basics clearly.

Effectively Unification of theorie will drag behind the Science. It will create additional virtual theories unnecessarily.

**3.2 Effect of Gravity and Anti-Gravity of Dark Matter On the Universe:** It is explained as below. Please see the figure-1 below..

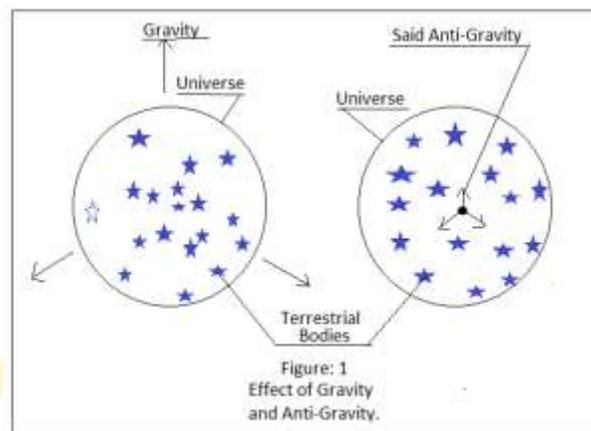
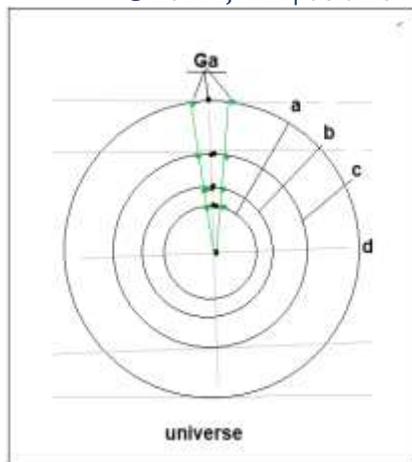


Figure: 1.

Effect of Gravity and said Antigravity

When there were no universe, there must be energy in the universe. Moving mass or capable to move mass; is energy basically originally. When universe is came into existence, it means there must be energy in the universe invisible. That is the dark energy originally, the fine 68% of the total now in existed universe; that time, before the universe, it must be existed 100% in the whole cosmos.

When the Universe is pulled from all directions by gravity external to the universe, due to Dark Matter from outside of the Universe, from its all directions; towards the edges of the universe, the gravitational pull from outwards of the universe, will be greater at the edges of the Universe and it will gradually diminish towards the center. Therefore the density of Universe will be lower and lower towards outwards of the Universe. Because, internal to Universe, the gravity due to internal masses of the Universe, will be greater and greater towards center. The density of matter lessons as we see far edges of the Universe. This it will also help us at least in which direction the center of the Universe is. The matter density is same at all far distances in all directions as seen from earth, then, **the whirling the most whirling elementary particles Ga rushing to a point, forming vortices, colliding vortices to form the elementary and there from atoms and so on causing Birth of the Universe.** Then in that case, me suggested Whirling matter theory is applicable. To form the singularity of Big Bang. It can happen due to the two dimensional nature of these particles.



**Figure: 2**

**Density of the most elementary matter  
Ga in the universe, in the universe.**

**3.3 Force Between the Most Elementary Particle Gravitational Constant G & Ga:** From Einstein's energy-mass transformation relation, as in equation-1 below.

$$E=mc^2 \text{ -----(1)}$$

and Planck's relation for elementary quanta of minimum energy existed universe that is, as equation-2 here.

$$E=hf; \text{ -----(2)}$$

we find the the most elementary minimum original mass existsd in universe to be as given by equation-3 below.

$$m = h/c^2 \text{ .-----(3)}$$

that works out to be equal to  $7.36 \times 10^{-51}$  kg. There is common gravity force in the space it is G called Big 'ji' i.e. G. It works as universal constant of gravitational force and worka as a unit for gravitational force between two masses. That G is due to the mast elementary mass particles in space homogeneously contained in free free absolute space, distant from each other equal to their each size. They are two dimensional each and of size  $7.36 \times 10^{-51}$  meter. So let us find the mutual gravitational force between two particles Ga consecutive to each other. so assume its above said mass equal to  $m_1$  and  $m_2$  of each of the two consecutive particles and distance between them to be  $r$  in free space. therefore, the force of gravity between them is, as per the equation-4 given below.

$$F = G.m_1.m_2/r^2 \text{ N where, } G = 6.674 \times 10^{-11} \text{ m}^3 \cdot \text{kg}^{-1} \cdot \text{s}^{-2}$$

$$m \text{ each} = 7.36 \times 10^{-51} \text{ kg.}$$

$$r = 7.36 \times 10^{-51} \text{ meter. as Ga is two dimensional---(4)}$$

Substituting and pting the valumes of unknown values from the data above. We have force between two Ga particles as per derived equation-5 below.

Thus, these the most elementary particles maintain the super symmetry of the Universe. Suppose, there are two consecutive celestial bodies in space at a distant  $d$  from each other. their mutual gravity will reduce each body following inverse square law. Where their mutual gravitational force will equal  $G$ , they will feel free from each other. what is true for individual two bodies; is also true for assemblies of the celestial bodies'/terrestrial bodies.

**Einstein's gravitational constant is  $8\pi G T_{\mu\nu}/c^4$  wherein,  $T_{\mu\nu}$  is the stress energy tensor, with respect to space and time at that point in space of the tensor.** Einstein's constant is represented by  $G_{\mu\nu}$ . Beyond the universe  $G_a$  are contained up to infinite distance in all directions. Therefore its force acting on the universe from all direction obviously is too great. And it pulls the universe gravitationally from all direction constantly. But, pure logic doesn't allow it fully. According to it as we go farther and farther beyond the universe; the density of  $G_a$  should go on decreasing very smoothly, As the total globe of matter including universe becomes greater and greater its gravitational forces increase at a fixed distance from the globe surface. Therefore the mutual force between particles  $G_a$  must be increasing as distance between two consecutive  $G_a$  increases. And it does. Because the **units of big G are,  $N \cdot (\text{meter})^2 / (\text{kg}_{\text{mass}})^2$** . We have seen above that  $G$  is the force between two the most elementary mass particles in Newtons. In the universe wherein there are stars galaxies etc,  $G_a$  are spaced consecutively apart from each other by distance of their size. But, when spreading in vacuum beyond the universe, where there are natural celestial/ terrestrial bodies the particles become rarer as distance from universe increases and  $G_a$  distribution must become rarer; but, as per its dimensional formula mentioned above as  $N \cdot m^2 / kg^2$ ;  $G$  is directly proportional to the square of distance between them from each other. and inversely to the square of the mass of  $G_a$ . But in space they remain the same of each  $G_a$ . Hence  $G$  follows distance square law directly. Then. Question arises, how the cosmos as a whole, maintains its super symmetry? It is done by the accelerating expanding universe. Due to  $G$  follows 'proportionate distance square law'. the universe might be expanding not at accelerated rate of speed; but, it must be accelerating at accelerated acceleration. I think it is the main reason of changing Hubble constant at the same point in space as time goes on. In increasing distance between consecutive  $G_a$  very slowly with respect to space; there is maintained almost constant reverse to each other on both sides of a  $G_a$  particle due to  $G_a$  blob on one side having particular density; lower if it is on universe side and another blob on opposite side of the  $G_a$  applying same force but with a bit different density of particles  $G_a$ . Therefore, in the structure of the universe, the position of that particle  $G_a$  in the universe as such remains the same and moving respectively as per expansion of the universe. Please see the figure-3 below.  $r_1$  is the radius of universe at an instant. Beyond universe, particles  $G_a$  are all around it up to infinite distance. Take sphere circle  $r_2 = 2r_1$  and take an angled segment of outer circle. the particles between volume, between universe sphere  $r_1$  and that of  $r_2$  are greater than  $r_1$ 's. definitely the  $G_a$  volume inside universe will be much attracted outwardly by particles  $G_a$  outside universe. As force of  $G_a$  is proportionate to square of distance

the Ga in universe along with celestial bodies will be attracted outwardly. Definitely particles beyond  $r_2$  also attract the universe outwardly. As the forces of particles act continuous universe expands at accelerated rate. As the Ga particles are throughout the cosmos whole space, the acceleration of the universe won't reduce; for they are infinitely filled in the cosmos.

The quarks are made up of particles Ga touching to each other. therefore quarks can not be separated in proton or neutron or in any else. Because the force of Ga is proportionate to square of distance between them two. When two quarks are coupled touching to each other without any space in between them they unite and at their out side the force follows inverse square law and that it gravity. It means a single Ga when considered force line from oneside to other side starts giving increasing increasing force to other side and the particle Ga is in between of the force line; what ever smallest may be the force. At one end of cosmos the force tends to zero and at other end of cosmos it tends to infinite. As gravity doll always stand erect though it is slept. The increased gravity force, lines of Ga are facing towards the center of the universe. So, forces of Ga go on reducing tending to nil as those lines tend to infinity. Such lines of other consecutive universe meet our universe's force lines creating zero force at suitable points of zero resultant of the two or more probably. Due to force lines of Ga following square law of distance facing towards the universe and we have not yet came across such force following square law of distance we say that Dark Energy have anti-gravity property. But, we ave seen that, Dark Energy, keeps constillations sized. In respect of separating Quarks of a neutron or so, we had observed that as they are separated from each other the mutual forces between then increase as per separation distance as if a spring is pulled to create tension in it.

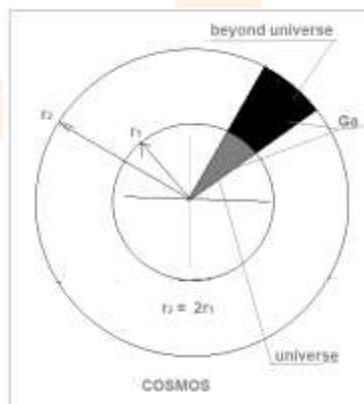


Figure: 3.

Sectoral density of Dark Matter  
At Far From Big Bang Center

Before the first ever universe., there must be cosmos while full of the most elementary particles Ga having mutual gravity G. the gravity became possible maximum at the core. The core must have collapsed into Big bang singularity. Then through Big Bang the universe formed. Remaining Ga in core remained within galaxies, in between inter stellar galaxies. The whole Ga contained space around the universe., remained pulling the universe from all sides of the universe by gravity of particles Ga at an accelerated rate. They have not either thought the the

particles Ga dark energy even beyond the universe therefore, they assume an anti gravity force. And that imagination is easier than trusting on Ga and their existence beyond universe.

In the universe, due to big celestial masses and their great gravity, the Ga are dense near the bodies and rare between them. But in universe outside, they are dense so their gravity must be increased in total as we go further and farther beyond the universe.

When there were not the universe; only a blob of Ga particles. Their gravitational forces were concentrated at the center of the blob. The particles started collapsing into each other; forming more and more dense point mass. Because, particles are two dimensional. That each have no thickness. And increasing their number in the point, goes on increasing the single point's gravity. After immediate bang the matter particles got speeds greater than  $c$  and ionized. But, around the bang singular point, there were mach density. The banged material had to pass that denser material. Thus, reducing its speed and losing their ionization. Once the banged material passed the banged the denser Ga material; it regained its speeds greater than  $c$ , recovering their ionization. then forming atoms etc. and celestial bodies. the other blob remained of particles Ga. Its density went on increasing towards its outer and outer surface. It means capital G go on increasing outer and outer universes smoothly, all attracting the universe generated from inside. Thus, imparting accelerated speeds to the expanding universe. Einstein's Special Relativity allows to assume truly such blobs in the cosmos filled with particles Ga.

The antigravity term is not any practically meaning.

**3.4 Change in Capital G:** Inside universe; G is constant. It is assumed on the basis of observation in our earth's MParsec belt. G is due to gravitation due to the most elementary particles Ga. But, with expansion of universe, they are also moving in direction of expansion. With accelerated motion as the universe. Therefore due to self inertia of each particle they are a bit lagging behind each other. Hence, their mutual forces will be a bit reducing in the universe instead of increasing as expected above somewhere. So at after each Parsec distance, the G will go on reducing. But, beyond the universe. All Ga are still mutually attracting each other from opposite to each other side. Therefore, there the Ga are denser; thus, giving value of G higher. Taking equal blobs of Ga on all sides of the universe, along its periphery and calculating their forces according to Einstein's Special Relativity. those forces are attracting the universe from all its sides. Hence, the universe is expanding. If we will note the 68% Dark Matter, it will also denote the change in G as above. The acceleration due to Ga outside the universe will vary on the universe as per distance of its portion from its outskirts. It will go on decreasing towards the singularity bang point. Therefore, the universe must not only expand with accelerated velocity but, with accelerated acceleration of accelerated velocity.

One more the most possibly is discussed ahead. The particles expanding along with universe expansion develop less gap between consecutive of them in expansion direction of the universe than that, from inside of the universe. As universe expands, internal to the universe, vacuum of  $G_a$  increases and its inverse proportion force to distance between consecutive  $G_a$  is a bit higher than that  $G$  outside the universe and it keeps the the symmetry of forces in universe expansion. Obviously at a sufficient distance from the Big Bang point, a solid sphere of  $G_a$  is formed sufficiently thick, attracting the universe outwardly. In that process the celestial bodies in the universe break into particles  $G_a$ , due to the tremendous acceleration of the celestial bodies in the universe. They hit the solid sphere enclosing the universal domain and are relected back towards the Big Bang point to form the universe again. This phenomena is as per science of shrimadbhagawad geeta.

Nature of gravitational property of  $G$ : From gravitational force equation,  $F=G.[m_1.m_2].r^{-2}$ , We get  $G$  directly proportional to square of distance between the masses and inversely proportional to the square of the two acting same masses, mutually acting. It means, as distance between two  $G_a$  particles is equal to each of their size then the gravitational force between them is  $G$  as derived above. In the universe they are set around us. As their speed increases in measure of  $c$  in the universe where the universe expands at speed in the range of  $c$ , distance between consecutive  $G_a$  particles increase but there are many such particles in line farther and farther, their forces on considered particle  $G_a$  near are greater than its consecutive particles. So they all  $G_a$  particles will be crowded as they travel in outward direction of the universe during expansion of the universe. And at last at a sufficient distance from the singular Big Bang point that will form a thick shelled sphere within which our universe cycle go on running. When, all  $G_a$  reach this limiting shell vacuum absolute is created. That force then attracts particles  $G_a$  from all sides similar. By grav force between diametrically opposite  $G_a$  particles, which obeys distance square law. Therefore the most elementary mass particles will travel to the big bang point. As they near that point very dense  $G_a$  structure may start constructing hydrons; those colliding at a point and collapsing all in it, creating tremendous heat and pressure and initiating Big Bang by that. Further formation and running of the universe follow as we know. When moving  $G_a$  have formed matter from 5% of them, their distances between consecutive equal to their size is established. They establish themselves in space at their positions. Again the masses in universe feel the gravity following square distant law and experience tremendous force from  $G_a$  particles in the sphere around the domain of the universe. The accelerated expansion of the universe starts again cyclically. The universe cycle Big Bang-expansion-contraction-Big Bang ....continue. This theory is well indicated also in Indian spiritual philosophy of Shrimadbhagawad geeta.

The particles  $G_a$  are near to each other by distance of their size. Therefore their gravity between consecutive one's is  $G$ . though gravitation passes through particles it becomes greater near

surface of celestial bodies. And hence celestial big bodies attract them and particles Ga are crowded around them. It is why, the surface of celestial bodies are above its seen muddy surface. In proton, neutron, three quarks can not be separated from each other. Because, as they are pulled apart; their glue becomes more and more stronger. The glue must be of Ga particles touching edge to edge. And the quark from sticking surfaces to surface of consecutive Ga solidly sticks to each other and forming round shape. In round shape particles are nearer to each other. Their, that of particles forces bring them nearer and nearer so that they stick each other and cannot fall into the center of it

Ga are the most elementary particles of the universe having mass  $h/c^2$  and minimum energy quanta  $h$ , the Planck's constant, the minimum quanta of energy that exist in universe. Planck's energy equation  $[E=hf]$  and Einstein's energy mass equation  $[E=mc^2]$  both in combine define the most elementary mass corresponding to  $f=1$ , equal to  $h/c^2$ . What must be its anti mass. Fundamentals light photon is  $h/c^2$ . It travels in free space in a frame attached to its frame at speed  $c$ . in its emitted direction. In that direction it travels along a fixed line determined by its source. If source moves, the direction line also moves and along that line, remaining along in the line the photon too moves. Photon is point like; the line is extended long up to infinite distance. Photon has mass, whatever small it is; the line is mass less, photon moves along lineationary with respect to source of light. In free space the Ga are positioned, whirling around themselves defining its path and its small space domain. Thus, PHOTON PATH IN SPACE IS ITS ANTI PARTICLE IN THE FORM OF LINE, A LINE FIELD. Every field has energy like potential one. It drives its respective particles. Photon field drives photon particles exhibited basically as Ga. Other particles electrons, protons, neutrons all are made from from these Ga particles basically. Therefore their fields are in bunch or number of photon fields of those respective particles. It is shown initial portion of this article, how electric field is produced by these Ga particles. Magnetic field is associated to it; it is not self independent field. So antimass of Ga particles is its line of travel the photon field line. The concept is beyond present concept of field lines.

Field lines can entangle with each other or interfere with each other if their particles travel hand in hand so extremely dense; otherwise they do not; and pass across each other without affecting one another any way.

If the most smaller mass particles Ga have gravity in square proportion to radial distance from it; it seems its symmetrical distribution, even on an average is not possible. I have logically assumed above a sphere of Ga particles dense of diameter. Where the whole universe bodies shall convert in particles Ga. Now, see that space as scalar field. In the expanding universe having constant. But, when, the universe domain is assumed as above since its birth to its whole transformation in Ga. The field space is to be assumed vector. During expansion of the universe the space force lines that the gravitation lines of Ga in the spherical envelop are directed from

the sphere inside surface towards its big bang event point center following square law of distance. And when the Ga particles of the universe collide to the inner sphere they get reflected with the same force of collision, reversing its faces so that, they now follow square law towards the center. At the first instant, they move towards the big bang (b.b.) center due to the force reversal due to above collision and due to vacuum force developed inside the sphere due to nil amount of say gaseous Ga, once some particles are towards the center, nearer to it their square law following force lines drag other collided particles and reversed, so that mass concentrated occurs at the b.b. center. The Ga particles are, tagged to the force line at a point where the force named gravity/gravitation is equal to  $G$  when all Ga forming universe are collected at b.b. point, their normal gravity given by gravitation law is infinite; because, they unite touching their surface to surface and making the sticking force infinite. They being two dimensional; can be assembled in infinitely number in a minute sphere of radius of fraction of an mm. infinite Ga particles in a point sphere mutually in between each couple infinite gravitational force develop tremendous pressure to be said infinite gravitational pressure causing the Big Bang. The first action in b.b. would be coupling of two Ga particles such that, their faces facing the force lines following the square law. because, due to increased distance between particles the consitive particles Ga, face each other with force following square law. And unite giving in space the inverse square law of gravity. At the first moment, the expansion of the particles is due to the b.b. force. Soon the force lines of inside of the universe's domain space sphere, which are following, square law; attract the Ga coupled particles. In the way they unite to form elementary particles electrons neutrons protons etc. then celestial/ terrestrial big massive bodies. Creating their individual gravity  $g$  from the resultant gravity  $G$  due to coupled Ga. [here after represented as  $Ga^2$ ]. The force lines follow square law of gravity. Therefore Ga in a massive body forms spherical surfaces of equal gravity  $g$  around the center of the body. IT IS EINSTEIN'S BEDDING OF SPACE OR SPACE WARPING. IN UNIVERSE INVERSE SQUARE LAW OF GRAVITATION WORKS. AND IN THE UNIVERSAL DOMAIN SPHERE, SQUARE LAW IS WORKING FOR EACH Ga is alone in the sphere surface; and therefore the forces, radial forces across the sphere from its b.b. center radial maintain the symmetry of each Ga force line.

In respect of multiverses; each universe must be having such like here said; space domain spheres same Ga particles. Between two space domains of the universes, there ought to be  $Ga^2$  particles. For not to collapse the multiverses. Their  $G$  lines following inverse square law keep them stable floating at their positions in the whole cosmos space.

We can match, the particles Ga as prapachand the force lines as maya as maya, prapanch are in Aryan philosophy. Please see the below self illustrative figure of Ga. the most elementary mass particle.

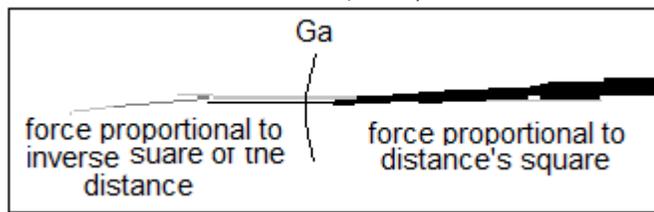


Figure: 4.a

Gravity force of the particles Ga Each

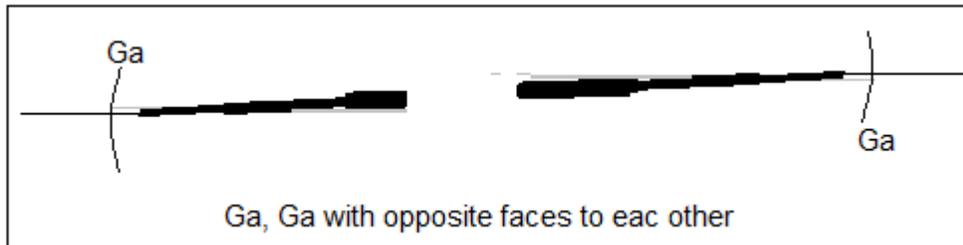


Figure: 4.b

Gravity Force of the Uniting Two Particles Ga in the Uiverse; to

Form the Further Elementary Particles and Massive Bodies.

When number of Ga particles aligned in a line, the space in the line remain stretched and effectin to value  $g$  increased. it is like; mark points equi distant on a rubber band and stretch it. The points remain equidistant with increases distanve between any consecutives equally. In case of universe, that stretching force is converted into accelerated motion of the universe.

At big bang, the force must of bang must be infinite. Due to it the the busrt Ga particlas must have moved as it were in singularity; pointing distance's square proportional Gforce towards the singularity center. But due to huge gravity of remaining Ga particles Their speed might have got down and they formed a thick sphere at suitable distance, decided by their outward momentum and frces from inside from the singular point radially. Light micro waves generated at big bang, is always alive since big bang. It must be because of its reflections from that universe's domain shell.

When in light photons as light particles their the concave surface fades the source and the convex towards the observer.

When a water jet fall from a height on ground below; it experiences gravitation increasing, following inverse square law. Therefore, lower water-segment experiences more gravitation that that upper consecutive. Therefore, as water comes towards ground, it breaks into water-drops. The distance between two consecutive drops increases as the water of the jet travels towards eath's ground. That phenomena will be reversed in quality; in case the iet is falling on

some ground where, the gravitation follows square law. There that distance, will lessen. And instead of continuous water jet ejected from height, that water will have to be ejected in continuous drops having larger distance between consecutive drops of water. This helps to explain the phenomena above in respect of figure-4a and b.

We have to keep in mind that, in the universe the Ga particles are coupled two making one; such that, there square law concave surfaces meeting each other firmly, as mentioned above at respective place in this article.

After the Big Bang, //all compacted material is spread in space forming different different entities and being attracted by its own gravity of first ring from bang forming a sphere, and with particle facing the center singular point was existed, towards it; and attracting with accelerated speed. As per logic in this article, the universe expansion, must be, not only accelerated expansion, but, acceleration accelerated expansion. This expansion must be creating a hole in space, at the Big Bang point an absolute void which must be increasing, as the universe expands more and more. The James Webb may show a thick line in all direction, indicating the universe's domain sphere. In that vacuum nothing. Nothing even the fundamental matter, the particles Ga. They have gone far away by the bang. So that hole space is empty. In that case, it is not there, any inward pressure like vacuum pressure. In vacuum contain particles  $Ga_2$  and no matter. The gravitation of  $Ga_2$  attracts the matter. That is the vacuum, absolute vacuum. Notation to two original Ga particle coupled with each other facing their concaves each other may be represented by  $Ga_2$  or  $2Ga$ . It is same please.

**4. Conclusions:** The most elementary mass particle is Ga whose mass is  $h/c^2$ .

The particle is constituent of 68% Dark Energy of the Universe and big G in the universe is due to its gravitational original property.

Particle Ga gives the symmetry to the universe.

Ga are present not only inside the Universe; but, even outside of the universe in whole cosmos. It gives accelerated acceleration speed to the expanding Universe.

In the universe, Ga provide capital G, the micro gravity. Outside the universe, their gravity of more and more particles, acts on each one Ga particle in the universe. Therefore, capital G goes on increasing farther and farther beyond of the universe. Its increased steps may be taken for suitable number 'n' parsec.

G must be greater than that in the universe.

Universe is not only expanding with accelerated velocity; but, with acceleration of accelerated velocity.

There is a solid sphere formed from the most elementary mass particles Ga enclosing the domain of the universe in the total cosmos.

Its antimatter is its photon field line of its travel. infact athe anti existence of Ga is the space; the space line respective to its both sides of it. In front of concave, it it is following distance square law ans in front of its convex side it passes the force following inverse square law.

There is absolude void and not vacuum as such, there is void created , which is increasing, as the universe expads.that void is not vacuum. Such voids may be created in expanding universe. At points, around which big constilations are there. Their gravity does this.

## 5. Referrences:

A Study on Vibration-Induced Particle Motion under Microgravity by Mehrrad Saadatmand

At the South Pole, astronomers try to unravel a force greater than gravity that will determine the fate of the cosmos; **Richard Panek**, April 2010: <https://byjus.com/jee/units-and-dimensions/#:~:text=How%20to%20do%20demonstrate%20dimensional%20analysis%20with%20an%20example%3F>; in

Byju's, units and Dimensions- Dimenrional formula..

Could a black hole reveal clues about the Epoch of Reionization?

Dark Energy | COSMOS - Centre for Astrophysics and ...

Dark Energy: The Biggest Mystery in the Universe.

Einstein.s most famous equation  $E = mc^2$  – EarthSky  
<http://earthsky.org> > Human World

Günther, Helmut; Müller, Volker (2019), Günther, Helmut; Müller, Volker (eds.), "Einstein's Energy–Mass Equivalence", *The Special Theory of Relativityinstein's World in New Axiomatics*, Singapore: Springer, pp. 97–105, doi:[10.1007/978-981-13-7783-9\\_7](https://doi.org/10.1007/978-981-13-7783-9_7), ISBN [978-981-13-7783-9](https://www.isbn-international.org/product/978-981-13-7783-9), archived from the original on 2021-02-21, retrieved 2020-10-14

Large Hydron Collider Creates Matter From Light – SciTechDaily; 06-Sept-2020.  
<http://sciteckdaily.com> > large-hydron-collider-creates-...

Liquid Force and Rupture Distance between Two Particles  
<https://www.hindawi.com/journals/amse/2021/3542686;19/08/2021>

**Author:** Cheng Pu, Fengyin Liu, Shaohan Wang **Publish Year:** 202 .1

By [Paul Sutter](#) published May 30, 2019

Newton's law of gravitation | Definition, Formula, & Facts

<https://www.britannica.com> › Science › Astronomy

New Scientist: Why is the Earth moving away from the Sun? SPACE; 1,JUNE, 2009; BY Kelly Beatty

Plank's Constant | COSMOS – Centre for Astrophysics and

<http://astronomy.swin.edu.au> > cosmos > Plank's+Con

Powerful, nearby black holes could help to explain universe's origins

By [Doris Elin Urrutia](#)

Shrimadbhagwadgeeta chapter 15 stanza 4.

What is the cosmic microwave background? By [Elizabeth Howell](#), [Daisy Dobrijevic](#) published January 28, 2022

What Are Cosmic Voids ? – Universe Today. <http://www.universetoday.com>> what-are-cosmic-voids

Günther, Helmut; Müller, Volker (2019), Günther, Helmut; Müller, Volker (eds.), "Einstein's Energy–Mass Equivalence", *The Special Theory of Relativity in Einstein's World in New Axiomatics*, Singapore: Springer, pp. 97–105, doi:[10.1007/978-981-13-7783-9\\_7](https://doi.org/10.1007/978-981-13-7783-9_7), ISBN [978-981-13-7783-9](https://www.isbn-international.org/product/978-981-13-7783-9), archived from the original on 2021-02-21, retrieved 2020-10-14

Newton's law of gravitation | Definition, Formula, & Facts

<https://www.britannica.com> › Science › Astronomy

[. Einstein's most famous equation: E=mc<sup>2</sup> - EarthSky](#)

<https://earthsky.org> › Human World

[Planck's Constant | COSMOS - Centre for Astrophysics and ...](#)

<https://astronomy.swin.edu.au> › cosmos › Planck's+Con...

[Dark Energy | COSMOS - Centre for Astrophysics and ...](#)

Dark Energy: The Biggest Mystery in the Universe

At the South Pole, astronomers try to unravel a force greater than gravity that will determine the fate of the cosmos; **Richard Panek**, April 2010: <https://byjus.com/jee/units-and-dimensions/#:~:text=How%20to%20do%20demonstrate%20dimensional%20analysis%20with%20an%20example%3F;in>

Byju's, units and Dimensions- Dimensional formula..

New Scientist: Why is the Earth moving away from the Sun? SPACE; 1,JUNE, 2009; BY Kelly Beatty.

.A Study on Vibration-Induced Particle Motion under Microgravity by Mehrrad Saadatmand

## Powerful, nearby black holes could help to explain universe's origins

By Doris Elin Urrutia published 1 day ago

Could a black hole reveal clues about the Epoch of Reionization?

.Shrimadbhagwadgeeta chapter 15 stanza 4.

## Liquid Force and Rupture Distance between Two Particles

<https://www.hindawi.com/journals/amse/2021/3542686>; 19/08/2021 · The study of liquid **force** has a special meaning to industrial manufacturing. By taking the liquid bridges **between** equal and equal **particles** as objects, the liquid **force**-displacement curves were measured and recorded by using a novel Nano UTM T150 tensile system. The influences of diameter, diameter ratio, liquid volume, and the surface tension on ... **Author:** Cheng Pu, Fengyin Liu, Shaohan Wang **Publish Year:** 202 .1

[Large Hadron Collider Creates Matter From Light – SciTechDaily; 06-Sept-2020 — The LHC is one of the few \\_\\_\\_\\_\\_ places on Earth that can produce and collide energetic photons, and it's the only place where scientists have seen two ...](#)

<https://scitechdaily.com > large-hadron-collider-creates-...>

## What is the cosmic microwave background?

By Elizabeth Howell, Daisy Dobrijevic published January 28, 2022

Original before modi as per say ofjournal

Günther, Helmut; Müller, Volker (2019), Günther, Helmut; Müller, Volker (eds.), "Einstein's Energy–Mass Equivalence", *The Special Theory of Relativityinstein's World in New Axiomatics*, Singapore: Springer, pp. 97–105, doi:[10.1007/978-981-13-7783-9\\_7](https://doi.org/10.1007/978-981-13-7783-9_7), ISBN [978-981-13-7783-9](https://www.isbn-international.org/product/978-981-13-7783-9), archived from the original on 2021-02-21, retrieved 2020-10-14

Newton's law of gravitation | Definition, Formula, & Facts

<https://www.britannica.com > Science > Astronomy>

[. Einstein's most famous equation: E=mc2 - EarthSky](#)

<https://earthsky.org > Human World>

Planck's Constant | COSMOS - Centre for Astrophysics and ...

<https://astronomy.swin.edu.au > cosmos > Planck's+Con...>

## Dark Energy: The Biggest Mystery in the Universe

At the South Pole, astronomers try to unravel a force greater than gravity that will determine the fate of the cosmos; **Richard Panek**, April 2010: <https://byjus.com/jee/units-and-dimensions/#:~:text=How%20to%20do%20demonstrate%20dimensional%20analysis%20with%20an%20example%3F>; in

Byju's, units and Dimensions- Dimensional formula..

New Scientist: Why is the Earth moving away from the Sun? SPACE; 1,JUNE, 2009; BY Kelly Beatty.

.A Study on Vibration-Induced Particle Motion under Microgravity by Mehrrad Saadatmand

### Powerful, nearby black holes could help to explain universe's origins

By Doris Elin Urrutia published 1 day ago

Could a black hole reveal clues about the Epoch of Reionization?

.Shrimadbhagwadgeeta chapter 15 stanza 4.

### Liquid Force and Rupture Distance between Two Particles

<https://www.hindawi.com/journals/amse/2021/3542686>; 19/08/2021 · The study of liquid **force** has a special meaning to industrial manufacturing. By taking the liquid bridges **between** equal and equal **particles** as objects, the liquid **force**-displacement curves were measured and recorded by using a novel Nano UTM T150 tensile system. The influences of diameter, diameter ratio, liquid volume, and the surface tension on ... **Author:** Cheng Pu, Fengyin Liu, Shaohan Wang **Publish Year:** 2021

[Large Hadron Collider Creates Matter From Light – SciTechDaily; 06-Sept-2020 — The LHC is one of the few places on Earth that can produce and collide energetic photons, and it's the only place where scientists have seen two ...](https://scitechdaily.com/large-hadron-collider-creates-matter-from-light/)

[https://scitechdaily.com > large-hadron-collider-creates-...](https://scitechdaily.com/large-hadron-collider-creates-matter-from-light/)

### What is the cosmic microwave background?

By Elizabeth Howell, Daisy Dobrijevic published January 28, 2022