

# Mechanics of Mass Formation from Dark Energy

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**Abstract** Earlier the entire space was filled up with dark energy, a condensed form of origin of existence. Dark energy is stable, calm and quiet form of motionless invisible homogeneous energy. All types of energy formations are derived out from dark energy i.e. mass; which in turn creates electro-magnetic and gravitational forces in non equilibrium condition. Universe is formed like bubbles within this dark energy due to some turbulence like big bang created inside. "Energy Particle" is the smallest unit/amount of dark energy within a regular tetrahedron shaped space that behaves like a particle and represents the characteristic of entire dark energy. Here it is shown that how spatial arrangements of these energy particles promote a concentric compressive force from surrounding energy particles in excited state that binds two energy particles in one mass particle space by strong force and forms one mass particle, i.e. a hydrogen atom. The existing equilibrium force is transformed into strong, weak, electromagnetic and gravitational forces in case of non equilibrium state i.e. in Universe.

**Keywords** Dark Energy, Energy Particle, Mass Particle, Equilibrium

## 1. Introduction

In physical cosmology and astronomy, **dark energy** is an unknown form of energy. The leading theory, however, considers dark energy a property of space. **Albert Einstein** was the first to understand that space was not simply empty [1, 2]. He also understood that more space could continue to come into existence. In his theory of **general relativity**, Einstein included a **cosmological constant** to account for the stationary universe [3]. After Hubble announced the expanding universe, Einstein called his constant his "**biggest blunder**." But Einstein's blunder may be the best fit for dark energy. Predicting that empty space can have its own energy, the constant indicates that as more space emerges, more energy would be added to the universe, increasing its expansion [4]. Although the cosmological constant matches up with observations, scientists still aren't certain just why it fits.

In this research work dark energy has been explained as motionless energy in equilibrium state of space, and when motion takes place in non equilibrium state, mass energy is formed. Space is totally filled up with energy that is either mass energy or dark energy but total energy remains fixed in Universe. Dark energy has property so space has property. Universe is finite and fixed with respect to total space but the dark portion is expanding due to transformation of mass energy to dark energy. Theory of everything is a hypothetical all-encompassing philosophical explanation of nature or

reality. Reality is space and time starts after formation of mass from space occupied by this motionless energy. This motionless energy is summation of unit energy spaces. Unit space is a regular tetrahedron shaped space having a property of sensing pressure difference of point space and neutralize the difference by force developed by four surfaces formed around it. Total space is summation of all these unit spaces. We are also energy space occupied by mass energy that was formed under stressed condition of dark energy with five sensing organs. When all of these unit spaces are filled up with dark energy then that space is called dark energy space. Unit space contains four point mass spaces. Point mass space is the union of two oppositely directed dark energy point spaces. Oscillation of four point mass spaces with different frequency and amplitude of  $+1/2$  and  $-1/2$  along twelve line spaces ( $+x, -x, +y, -y, -y, +z, -z$ ) of unit space and three surface oscillation of  $+2/3, -2/3, +1/3, -1/3$  amplitude on four faces of unit mass spaces are **quarks**, fundamental elementary unit mass energy space movements. All four fundamental forces, i.e. gravitational, strong nuclear force, weak nuclear force and electromagnetic forces are formed in non equilibrium state of dark energy, and are related by a single force i.e. equilibrium force that exist in dark energy in equilibrium condition. Shrinkage of space take place during mass formation from dark energy and expansion of Universe take place during mass energy to dark energy conversion. When we use the word "Universe expanding", we mean mass energy to dark energy transformation is taking place, and "shrinkage" means transformation to mass energy from dark energy.

Space starts from unit space and ends with total space. Unit space is defined as an infinitely small regular tetrahedron shaped space of fixed dimension and the entire

space is filled up with these unit spaces. Dimension starts from point spaces and increases with the number of point spaces within the shape of unit space. Two point spaces form one line space, i.e. 1D space. Three point spaces form one plane equilateral triangular space, i.e. 2D space. Four point spaces form one regular tetrahedron volume space, i.e. 3D space (fig.1). Space is totally filled up with dark energy and its derivatives. When there exists only dark energy at point spaces then that space is called dark energy space, invisible due to its motionless non emitting surface. Particle means a group of point spaces within a regular tetrahedron shaped energy space, where during small movement of point spaces do not affect the group centric movement. A group of dark energy of point spaces forms one “**Energy Particle**” with zero group centric movement (fig. 2). Smallest component of dark energy is energy particle and smallest component of mass energy is mass particle (fig. 6) with two point dark energy particles in one point mass energy particle space in excited state of dark energy. The meaning of one is the existence of unit mass space and zero is the state of equilibrium, i.e. dark energy space. Mass space starts from point space with dimension one in unit time, i.e. unit point mass space. Equilibrium is non/negligible movement of dark energy in point space in zero time. Non movement means movement of mind before formation of body. With movement, formation of mass particle starts in point space in zero plus time with body and mind. Under the influence of high compressive force from surrounding energy spaces during movement, dark energy converts into two parts with very concentrated portion in the center called proton or body and surrounding ray emitted by central part called electron or mind. Movement of mind without body towards point dark energy space is the only criterion of dark energy. In equilibrium state, space filled up with dark energy concentrates only at point spaces to neutralize the difference locally by energy particle of that point space. Mass means shrinkage of two unit dark energy spaces in one unit particle space due to strong force that binds two energy particle spaces in one mass particle space. During mass formation from dark energy the equilibrium force that exist in dark energy converts into twenty directional concentric forces (five each from four sides) and that lead to formation of fundamental forces. We all mass are living within a closed boundary of pentagonal dark energy spaces from which we are receiving five types of sensations. Internal arrangement of these energy spaces are hexagonal in structure where six energy spaces meet in one point space and forms coordinate axis X, Y, and Z with three planes XY, YZ, and ZX (fig.5a). Mass originates from point space. Point space is centroid of unit space.

## 2. Properties of Dark Energy

Dark energy is the coldest form of energy that can only exist in equilibrium condition. We are unable to visualize dark energy as no light is emitted from it due to its normal

motionless characteristics. When dark energy become excited due to some strong turbulence; sound, heat and light are generated from it due to oscillation of energy spaces then only distorted dark energy can be observed and sensed by our sensing organs. Dark energy is the original form of condensed energy and the universal expansion occurs from it due to various forms of masses and different types of energy in an agitating condition. Main features of dark energy are; a) Dark Energy is the purest source of energy and all other existing form of energy are conversion of dark energy in stressed condition i.e. impure, b) Dark Energy density is the same at every point of space, i.e. homogeneous, c) Existence of Dark Energy depends upon equilibrium condition, d) Dark Energy is stable, calm and quiet, i.e. negligible or no movement of dark energy at point spaces take place in equilibrium condition, e) Dark Energy ray of point space moves in straight line in all direction of space with constant velocity when excited. In micro scale during movement or tendency of movement of dark energy at point space is resisted by infinite number of point spaces surrounding them but in macro scale three dimensionally movement is resisted by six energy particles in +Zero X, +Zero Y, +Zero Z, -Zero X, -Zero Y and -Zero Z direction where Zero is the starting point of dark energy movement or tendency of movement at point spaces (Fig.5a), f) Movement of Dark Energy at point space leads to emission of light and production of sound due to interferences by other point dark energy spaces, g) Dark Energy emits no light in equilibrium condition so invisible, h) Under excitation Dark Energy transforms into other forms of energy that may emit light and become visible, i) When homogeneous dark energy space divides into denser and lighter energy space due to high compressive force and binding of dark energy spaces, mass energy is formed and that leads to shrinkage of space due to binding of quantum dark energy of two spaces in one unit space.

In equilibrium condition Dark Energy establish one communication system through its smallest component “Energy Particle” that expresses condition of dark energy at each point spaces to entire dark energy space without time. Dark Energy may be considered as super power or “God” and its smallest component as “God Particle” as it controls and maintains equilibrium state of entire space.

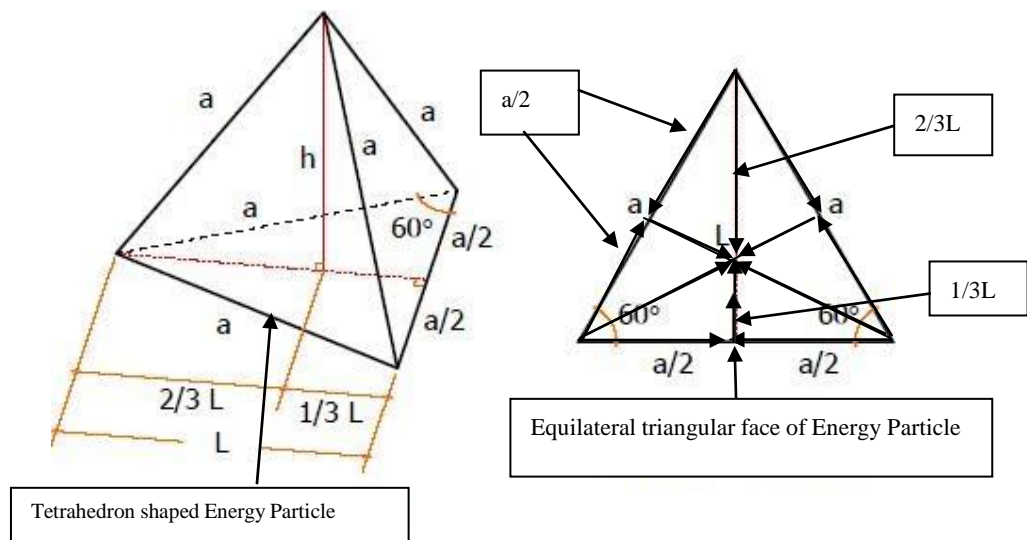


Figure 1. Unit space is formed by four point spaces

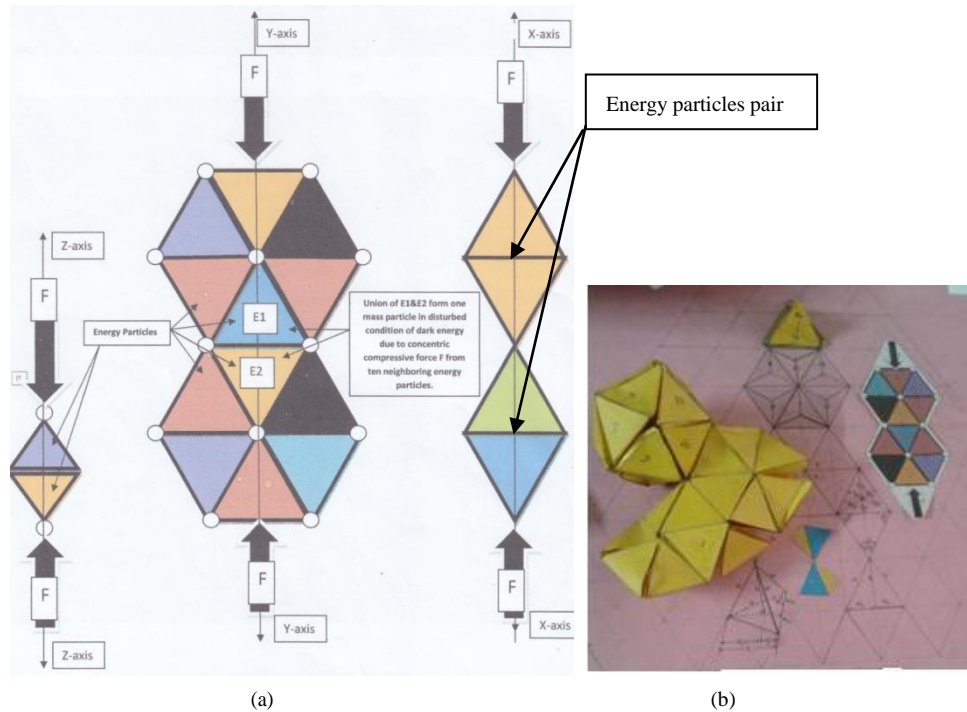
### 3. Properties of an Energy Particle

Energy Particle is defined as smallest amount of dark energy within a regular tetrahedron shaped space that acts as particle without any wavy nature (fig. 2). Vertex and faces of these energy particles act as sensors and center of line, plane and volume of those energy particles, i.e. centroid act as self analyzers. Vertex of an energy particle act similar to our eye that senses pressure difference of a point space and four faces of energy particle exert neutralizing effect by sensing force difference of surface and act similar to our ear, tongue, skin and nose respectively. A regular icosahedra shaped space filling arrangement by these energy particles in dark energy form a communication network mechanism like our nervous system that controls the entire space containing dark energy without delay time. Through its vertex an energy particle senses a point space and spreads this sense to other energy particles of the entire space by its six edges and four faces. Energy particle is self stabilized within dark energy and when it losses self stabilization due to some zonal disorder of dark energy space then transformation to other types energy formation take place. If the centroid of particle remains fixed without any displacement i.e. no fluctuation of its central point of energy space then work can be performed by that particle without time. Followings are the main characteristics of energy particle: a) Energy Particle represent the characteristics of entire dark energy and act as unit of dark energy, b) An Energy Particle occupies an unit particle space within the space of dark energy. Unit particle space is the summation of Dark Energy at four point spaces within Energy Particle. c) Energy Particle is the smallest component of dark energy that acts as a particle and establishes a

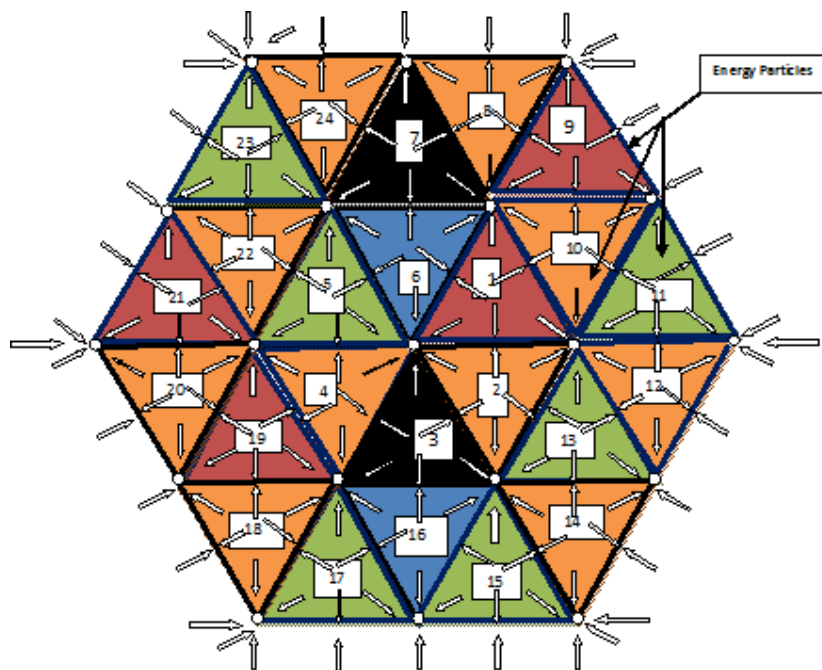
communication mechanism with other energy particles within dark energy. d) Energy Particle consist of four point dark energy spaces, six line dark energy spaces and four plane dark energy spaces. All the line spaces, plane spaces of energy particle remain in equilibrium during small movement or tendency of movement of dark energy at point spaces (fig.4), e) Energy Particles can be put together to fill three dimensional dark energy space such that there are no overlaps or no gaps. f) There are four vertices of Energy Particle that act as point dark energy space by which it senses pressure difference at point space and spreads that difference of pressure within dark energy by its six edges and four faces, three faces meets at any one vertex. There are four faces of Energy Particle by which it senses force difference in two dimensional spaces within dark energy, all of which are equilateral triangular shaped. There are a total of six edges in Energy Particle by which it communicate difference in sensation from one point space to other point space, all of which are equal in length. g) Energy Particle is self stabilized within dark energy, i.e. centre of line spaces and center of equilateral triangular faces of energy particle remains fixed with small movement of vertex, i.e. small pressure difference in point space is neutralized by surfaces formed by other three vertices of energy particle. h) Dark energy at point spaces travels in straight line from point space in three directions through its edges and faces. i) In energy particle action signal travels two third distance from vertex to center of equilateral triangular face and reaction signal travels one third distance from centroid to center of base and thus equilibrium of dark energy is maintained.



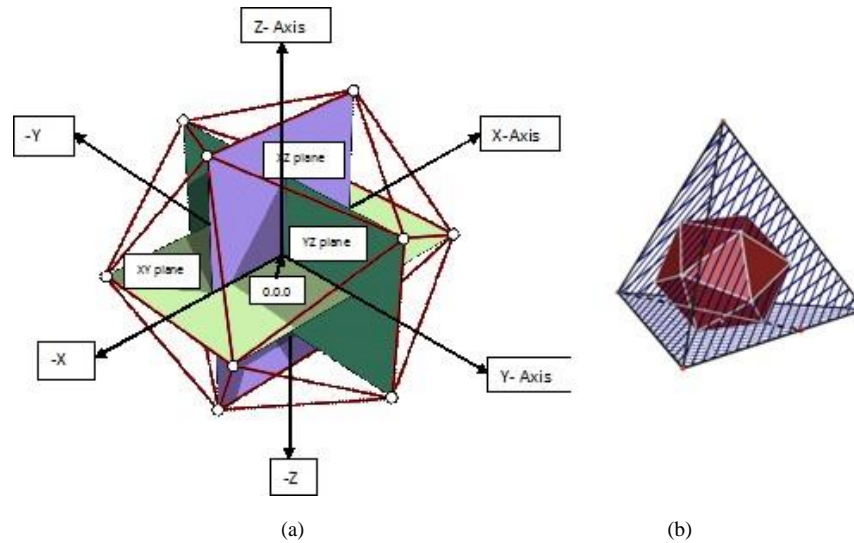
**Figure 2.** Energy Particle is the smallest amount of dark energy within a regular tetrahedron shaped space that act as unit of dark energy and participate in a communication network mechanism like nervous system of living organism. Energy particle is the only basic component of dark energy. It forms basic structure of mass within space of Universe. Energy particle has five organs by which it can sense from front to back, left to right and top to bottom. Eye of the energy particle is vertex by which it can sense point spaces, i.e. first organ. Second to fifth organs are ear, tongue, nose, and skin, i.e. four equilateral triangular surface of energy particle that neutralises difference in point spaces pressure by force developed in equilateral triangular faces



**Figure 3.** a. Energy particles are arranged face to face and vertex to vertex in axial z, y, x direction within dark energy. Two energy particles connected face to face form one pair. One of such pair is E1E2 that take active role in mass particle formation during non-equilibrium state of energy space. b. Twenty energy particles form one convex icosahedrons shaped dark energy space. This shape repeats itself to fill the entire three dimensional dark energy spaces. Activities of energy particles are initially confined within this space before transformation of signal to adjacent icosahedrons shaped dark energy spaces



**Figure 4.** Arrangement of Energy Particles at central plane of icosahedrons shaped dark energy space in equilibrium condition have hexagonal plane structure and take active role in mass element formation in non equilibrium state. One pair of energy particle is surrounded by ten energy particles. Arrangement of energy particles in dark energy space forms a communication network mechanism. The communication mechanism is formed with the network of point dark energy space, i.e. vertex of all energy particles. In the arrangement, each energy particle is enclosed within a pentagonal sphere of twenty energy particles and makes one closed group where all external signals convert into compressive force that exert axial pressure to vertex of energy particle pair within dark energy space from opposite direction. This compressive force transforms pair of energy particle to a mass particle. Total dark energy space is filled up with this group of twenty closed space occupied by energy particles. These groups make group of ten mass particles called society or cell in this Universe where any external sensational changes initiate an internal activity. Energy Particle pair 1&2, 4&5, 3&16, 6&7 etc. bind with each other in the process of element formation in non-equilibrium condition



**Figure 5.** a. Network of dark energy at point spaces form a three dimensional stable and fixed icosahedrons shaped space in equilibrium condition i.e. vertex of twenty energy particles within dark energy space form an information transferring system. Movement of dark energy at point spaces are confined within this space in equilibrium condition by resistance offered by adjacent icosahedrons shaped dark energy space surrounding that point dark energy space and information of dark energy at point space is transferred to adjacent point space without any displacement keeping centroid of energy particles fixed. Total dark energy space is three dimensionally filled up with these icosahedrons shaped local network system that transfers information from a point space to entire dark energy space. b. Icosahedrons shaped dark energy space within a tetrahedron shaped space

#### 4. Arrangement of Energy Particles within Dark Energy Space

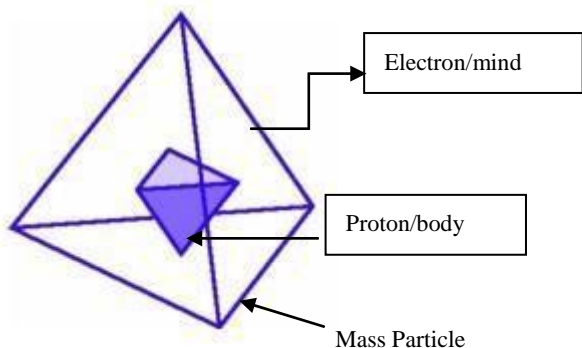
Axially each energy particle is connected with other energy particles through vertex to vertex and face to face (fig. 3a) and information of point space is transferred smoothly in the entire space without any physical movement of the centroids of these energy particles. Two energy particles connected face to face make one pair. Twenty energy particles form one 3D regular icosahedra shaped dark energy space with twelve pentagonal vertices (fig.3d). Entire Dark Energy space is filled up with repetition of these icosahedra shaped dark energy space formed by Energy Particles. Vertices of icosahedra shaped dark energy space forms three mutually perpendicular orthogonal planes, i.e. Frontal (XZ), Sagittal (YZ) and transverse plane (XY) and three axial line spaces, i.e. X-axis, Y-axis and Z-axis (fig.5a). Activities of energy particles are initially confined within this space before transformation of signal to adjacent icosahedrons shaped dark energy space. Central arrangements of these energy particles are hexagonal in structure (Fig.4).

#### 5. Mechanics of Mass Particle Formation from Energy Particle

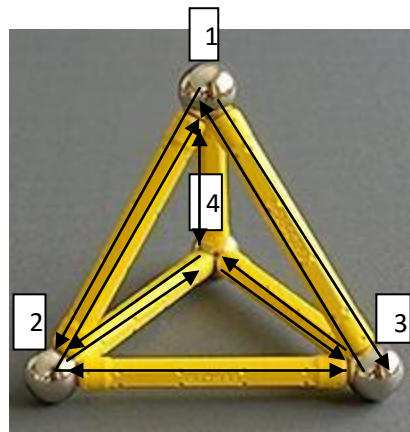
In equilibrium condition, ten energy particles surrounding two energy particles between two icosahedrons shaped dark energy spaces, positioned side by side, always exert a concentric equilibrium force during tendency of movement of point spaces and keep them together in a fixed position of space (fig.3). In non equilibrium condition this equilibrium force transformed into concentric compressive forces due to

icosahedra space filling arrangements of energy particles. When the equilibrium become unstable due to disturbance, oscillating movement of these energy particles take place within the dark energy. This oscillating movement causes existing equilibrium forces to convert into concentric compressive forces. Each vertex of energy particles pair is pressed by five energy particles from axially opposite direction. Two vertex of two energy particles connected base to base in axial direction are pressed by surrounding ten energy particles in non equilibrium condition. This concentric force increases many fold with amplitude of oscillation and force those energy particles to spin within dark energy. Rise of heat and temperature due to this spinning movement at the same space causes further rise of concentric compressive forces and strongly bind those effected energy particle pair in less space than in equilibrium state and leads to formation of large structures like star with the union of large numbers of energy particle pairs. This pair forms one mass particle when the non equilibrium axial force become very high due to high amplitude of oscillation of centroid of energy particle and high restoring equilibrium force. Confinement of two energy particles connected face to face in less space than the space available at equilibrium leads to formation of a “mass particle”- a hydrogen atom (fig.6). Binding and concentration of number of these energy particle pairs after cooling, i.e. mass particles in the nucleus decide the property and stability of elements. When two mass particles binds with each other in nucleus, one surface of each proton/body is exposed to surrounding that emit light dark energy rays and joining surface of both proton/body interfere with each other and become neutral due to binding. So element that was made with two mass particles, i.e. union of two hydrogen atoms in nucleus lead to formation of two

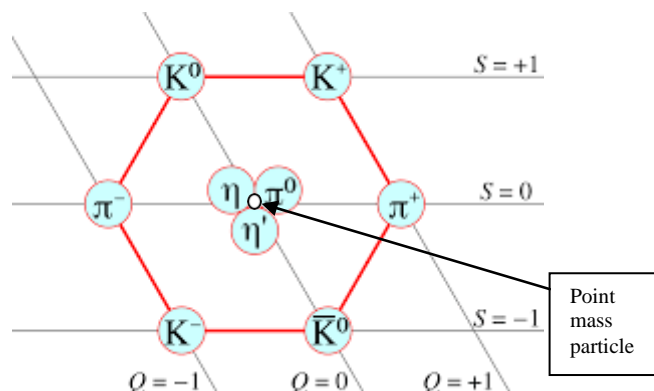
ray emitting surfaces and two neutral surfaces. Two ray emitting surfaces splits into two protons and two electrons and two neutral surfaces formed due to strong bonding are two neutrons. The only intention of electron/mind of hydrogen is the consciousness of freeing itself from existing state of binding by gaining internal energy through assembling procedure with other hydrogen/element and to return back to its original stable state of dark energy. Mass particles rearrange themselves according to their original space filling arrangement throughout evolution to convert itself in elements, molecules of tetrahedron and icosahedra shape to establish similar type of network mechanism that exists in dark energy. Mass particle assemble together with other mass particle/elements to store energy for their separation from binding state and that leads to formation of molecules. Twenty energy particles make a close communication group with hexagonal internal structure and pentagonal outer sensing surfaces. These twenty energy particles within dark energy space form a society/cell and information gathered from outer pentagonal face is transferred to center of that space and vice versa. Ten mass particles, formed from twenty energy particles like water that fills the line space, ammonia that fills the surface and methane that gives the structural formation like energy particle with phosphate as connector between molecules take an important role in forming living organism. Twenty number mass particles form one close icosahedra shape to fill the space to establish network mechanism similar to network mechanism of dark energy in higher organism.



**Figure 6.** Mass particle is formed due to disorder in dark energy where dark energy content within two energy particles connected face to face combine with each other in one space under high compressive force from neighbouring energy particles. The union of two energy particles connected face to face lead to formation of a denser and lighter zone. The denser portion is proton that makes our body and the ray emitted from surface of portion, i.e. flow of electron that makes our mind. Within dense portion of dark energy summation of rays oscillates between two third and one third distance, i.e. from vertex to centroid and centroid to base due to confinement of two energy particles in one unit particle space. When two energy particles combine in nucleus one mass particle-hydrogen atom is formed but when two mass particle, i.e. two hydrogen atoms combine in nucleus, joining surface of two hydrogen atom become neutral due to interference of emitted rays of two surfaces and a new element is formed with two proton, two electron and two neutron. When two mass particle combine in earth one hydrogen molecule is formed. As one icosahedron shaped energy space have twenty energy particles so ten mass particle can be formed within that space with 2, 2, 6 electronic configuration



**Figure 7.** Structure of Proton is formed by four point mass particles. 1, 2, 3, 4 are Mesons



**Figure 8.** Meson is enclosed within a 3D space formed with hexagonal plane energy space

## 6. Structure of Mass Particle

Fig. 6 shows a macrostructure of “Mass Particle” where central portion is proton and outer portion is flow of emitted ray, i.e. flow of energy due to oscillating movement of central structure. Microstructure of central part i.e. proton consist of four point mass particles within a unit space as shown in fig.7. Point mass particle is a point particle space, particle bonded by strong force consisting of two oppositely directed point dark energy particle space. Facial view of proton is equilateral triangular shaped energy space with three point mass particles in oscillating movement like relation between father, mother and you. Point mass particle is a united form of two oppositely directed point dark energy particles called “Meson” bounded by strong force (strong compressive force developed during movement of dark energy). With four mesons a 3-dimensional structure is formed and called a “Mass Particle”- a “Hydrogen Atom”. In Universe all structures are unstable. Basic structure is made with two point spaces adjacent to each other and called a line space (point mass particle space). All elementary basic mass structures are formed with four point mass energy spaces, having a shape of regular tetrahedron. In Universe “Hydrogen atom” is a basic stable structure with four point

spaces in 3D space. "Meson" (fig.8) is united form of two point dark energy spaces in one point mass energy space. Meson is a point mass energy space bounded by strong concentric forces. Meson is the meeting point of six energy particle spaces. Secondary structure is having a regular icosahedron shaped space formed with twenty numbers of basic unit spaces. Retrovirus is an example of secondary shape in early evolution.

## 7. Conclusions

Time started in past when mass particle i.e. Hydrogen atom was formed due to transformation of energy particle pair in disturbed state of dark energy and at present with increasing time human being has been formed through evolution & growth of sense with the intension of returning in future to the original stable state as energy particle. Dark energy ray moves in straight line within energy particle and concentrated dense dark energy ray moves in wavy pattern within mass particle due to its dual characteristics. Mass energy is a distorted form of dark energy in stressed condition and it exhibits dual characteristic of yes or no, positive or negative, true or false. All religious leaders like Buddha, Jesus Christ, Muhammad, Ramakrishna, Mother Teresa etc. with their body and proper sense of mind are human being born as representative of dark energy/God and they taught us about humanism to convert ourselves to human being from partial animalism by avoiding bull fight for space occupancy. We all came from calm & cool dark energy, i.e. our original motherland and should follow those leaders to reach our destination space as early as possible for uninterrupted peace. Though these religious leaders are born with mass energy i.e. summation of mass particles but by their activity they converted themselves to dark energy from mass energy so their unidirectional sense of mind is always correct, true and positive without any dual characteristics. Only and only criterion for mass energy should be the process of self stabilization and to convert itself to Dark Energy i.e. Energy Particles within dark energy.

Society or cell is having the shape of icosahedrons. It is a space occupied by twenty mass particles (amino acid). Arrangement of twenty particles within an icosahedrons space is a unit local space where every activity are operated and maintained by centralized nucleus (self) with its unit mass energy particle space. Six mass particles meet at center of nucleus space i.e. origin of hydrogen atom. RNA to DNA transcription processes used by retroviruses first caused DNA to be used as genetic material. Studies of retroviruses led to the first demonstrated synthesis of DNA from RNA templates, a fundamental mode for transferring genetic material that occurs in both eukaryotes and prokaryotes. According to one model, the RNA world hypothesis, cellular organisms adopted the more chemically stable DNA when retroviruses evolved to create DNA from the RNA templates.

Space is having five sensors like human being. We are all

summation of mass particles. A mass particle is hydrogen atom having body and mind. Hydrogen is the unit of mass. Different mass is formed by different container size of dark energy, i.e. number of hydrogen atom present properly within that container. Space is filled up with dark energy and other mass energy like dark matter, fire etc. Body is summation of proton and mind is flow of energy, i.e. electron. Electron is light dark energy emitted from denser dark energy with the communication mechanism formed inside by nervous system. Time taken by combined electron to execute any task is nerve conduction velocity. Photon is unit of electron. Photon is an amount of one unit light energy. Universe starts from formation of hydrogen atom. Mass is formed under stressed condition of dark energy. Movement of dark energy spaces causes this conversion. Twelve types of line movements of group of three nodal points takes place within an equilateral triangular plane space by point mass spaces with amplitude  $(+1/2)$  and  $(-1/2)$  (six action and six reaction) in hydrogen atom. Twelve types of group point mass energy spaces movement with amplitude of  $(+2/3)$ ,  $(-2/3)$ ,  $(+1/3)$  and  $(-1/3)$  takes place in four faces of hydrogen atom. Group surface movement of point mass spaces with different oscillation is known as quark. In hydrogen atom there are twelve quarks. Quark is oscillation of one point mass energy (two point dark energy in one point space) in a line space. In the unit space there are four point spaces within a regular tetrahedron space As twelve line spaces (six +action and six-reaction) movements in six lines of unit mass space takes place in positive and negative direction of energy space, there are twelve quarks in a mass particle. Purest form of energy is dark energy that only exists in equilibrium condition. Unit of dark energy is energy particle. Energy particle can execute task without time through its communication mechanism. Mass particle is formed in non equilibrium condition of dark energy. Through its vertex it can sense light. Through four faces, it can sense test, smell, hear, and touch. Mass is transformation of dark energy with four concentric forces at one point space. Defense system is formed by four vertices of hydrogen atom. Mass means strong binding of two point dark energy in one space. Dark portion increases with formation and transformation of mass energy to dark energy and reverse, i.e. decreases with its transformation to mass energy. Many unsolved answer about space has been solved in this research work so I think this research work will encourage scientist of different section to solve many problems.

**“Nature of nature is like human being to sense space by its five sensing organs but take true and correct decision to reach its goal for equilibrium”.**

**“We may regard the present state of the universe as the effect of its past and the cause of its future. An intellect which at a certain moment would know all forces that set nature in motion, and all positions of all items of which nature is composed, if this intellect were also vast enough to submit these data to analysis, it would embrace in a single formula the**

**movements of the greatest bodies of the universe and those of the tiniest atom; for such an intellect nothing would be uncertain and the future just like the past would be present before its eyes”.**

**— Pierre Simon Laplace, A Philosophical Essay on Probabilities.**

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