

## An hypothesis of the ending of a galaxy and its transformation to a black hole. With time , conversion of a new galaxy w.r.t. to a new five co-ordinate system.

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### ABSTRACT

Law of Attraction:-

The force that attracts bodily matter with a certain force of higher magnitude. This principle relates to the gravitational pull of attraction and thus also contributes to a centrifugal force (towards the outer side and a centripetal force (towards the inner side i.e. the inner pull). The planetary motion is comprising of both the centripetal force (x) and centrifugal force (x). both the forces act simultaneously one on the other over the planet; making the planet fixed to its own elliptical orbit or path .Here in this journal it is shown a hypothetical approach on how to find the black hole (formation) and its aftermath on the universe over the many light year; here a concept is shown on how we can approach towards a new galaxy in the universe or any other celestial body formations; keeping in view the basic laws of physical science. The fact that no mass can be created or destroyed, it takes the form of another identity; whereby; the case is similar w.r.t. to the energy ; thus defining the fact that the energy involved in the formation of a galaxy is equivalently equal to the destruction of the galaxy and the ultra negative force or full of the spherical tunnel of the black hole. We know that our universe conscious of a four dimensional spherical system vide:- x-axis; y-axis; z-axis; time space axis; but here a new co-ordinate axis has been hypothetically used for explanation of the creation; deformation and recreation of the galaxy ; the new orordinate axis is time-vacuum axis. Thus here a five dimensional coordinate axis has been used for practical reasoning of the formation of black hole; a huge energy in the vacuum. As the creation of galaxy defines it in time space axis; thus the destruction of galaxy into black hole falls into the time-vacuum axis.

### Keywords :

- 1) Spherical Co-ordinate System and axis
- 2) Black hole
- 3) Vacuum and its laws of attraction.
- 4) Space-time and vacuum-time interrelation between their axis.
- 5) Galaxy; Celestial bodies
- 6) Centripetal and centrifugal force
- 7) Yun-yang theorem
- 8) Negative energy creation
- 9) Falling down from any elliptical orbit of any celestial body
- 10) mass-to-Energy relation

## 1 INTRODUCTION

It is shown here ; a five dimensional co-ordinate system; x-y-z- Timespace; Time vacuum. All the co-ordinate axis are perpendicular to each other. All the co-ordinate axis called-Time-vacuum axis is hypothetically analyzed and made to an elaborative formation in the following way:-

If any object is moving in 'q' seconds in time-space domain w.r.t. to x-y-z axis; the same object is moving in '(q+t)' seconds in the timevacuum domain. Time't' is the time elapse of the movement of the object or the time gap between any hollow sphere already present in the space to its tunneling or funneling structure in the vacuum.

Time in relation to space:-

The interwoven continuum motion of any object w.r.t. to the time is related in the space time; and is dependent on the gravitational fields and other inertial movement of the objects w.r.t. to the observer.

Time in relation to vacuum:-

It relates to the empty space zone which consists of least value of quantum fluctuations (i.e. the temporary change in the amount of energy in any point of time ; in this is related  $\Delta E \geq \hbar / \Delta t$ . The mathematical explanation of the formation of the time-gap ('t')seconds is as under:-

$$\delta/\delta s(\text{space}) * \Delta(\text{time}) - \delta/\delta s(\text{vacuum}) * \Delta(\text{time}) = t * \delta t / \delta s$$

$\Delta(\text{time})$ =Change in time for the conversation of the object from the space to vacuum with a differential change in the displacement (special distance between the co-ordinate axis of time space and time vacuum axis).

Thus we find here that 't' seconds of the formation of the object (in any other shape) from its position in space then to its position in vacuum.

Let's consider an example;

When a heavy object f is thrown on a field made of rubber (not springs); it creates transverse waves flowing towards outer sides. If now on any case; any other smaller weight balls are dropped on the same platform after a few seconds later than the heavy ball (consisting of the continuous flow of transverse waves in the outside.); they start rotating on the field due to law of attraction around the bigger ball.

The elliptical movement of our celestial bodies in the milky galaxy can be explained as under and they tend to move in the similar way.

As we know that a circle is just taking a shape of an ellipse when the foci of the circle coincides. Thus as we also know and can confer here that there is a gravitational pull inwards for the planets and as the foci of the revolutionary path coincide; the path takes the form of an elliptical path.

As per definition of inertia, to resist any change w.r.t. to direction and speed of movement; the interaction of the planetary inertia with the gravitational attraction of the main star centered in the galaxy to create an inward pull of the planets towards it; they don't fall off from their elliptical paths. And the explanation is also versed with the fact of transverse waves for alteration to make the planets move round the main star; i.e. the revolutionary path.

Now suppose the main ball (#STAR) with the central pull of gravitation gets a transformation from mass to energy; i.e. out bursting of mass energy conversion; then equivalently the other balls i.e. planets' centrifugal force(x) and the centripetal force (x); now becomes as follows:-

Towards the main ball(STAR)  $\rightarrow$  towards the outside of the elliptical orbit = x force 'centripetal force' = y force 'centrifugal force'

Normally centripetal force = centrifugal force

At the time of creation;  $y > x$ , i.e. centrifugal force > centripetal force; for which the planets or other celestial bodies are thrown outer from the central zone pull of attraction; commonly called gravitational pull of attraction.

In the time of rotation of the planets or other celestial bodies; where by they don't fall out of their elliptical path; these forces equal other.  $y = x \Rightarrow y - x = 0$  (thus equally balancing each and the other forces) In the time of destruction of the galaxy; centrifugal force tends to zero; i.e.  $\lim |y|$  (tends to zero) = x, constant for the values less than  $y < 0$ .

$\therefore x - y = 0 \Rightarrow x - (-x) = 0 \Rightarrow$  centripetal force =  $2x$ , such a time; a hollow space i.e. vacuum is crated; thus a negative energy or pull in the formation of a funneling or tunneling path is created.

This hollow funnel with a funnel shaped structure at the starting point, so crated in the vacuum thus makes all the planets to get disbalanced in their elliptical path and make them collide and fall into the tunnel.

As there is no more attractive force anymore; to catch hold or grip the planets and also due to excessive negative pull of energy there is a mass colliding and eventually the planetary mass or the celestial bodily mass gets broken and deformed upto a conversion to energy.

The then created galaxy (space) changes to high energetic vacuum commonly a hollow sphere (Black hole, as was termed before). The tunneled vacuum which is full of negative energy; starts creating small to bigger massive vacuum in the galaxy with in many light years ('t'; as mentioned earlier); and thus the black hole gets enlarged)

The black hole continues to groove into a bigger zone or gap or vacuum in the universe while its movement takes place in the time vacuum co-ordinate axis w.r.t. to x-y-z and time-space co-ordinate axis.

The mass of energy conversion interments the size of the funneled mouth tunneling back hole (i.e. as mentioned earlier; the tunnel of the black hole is nothing but a simple movement of galaxy in the Time-Vacuum domain with a huge negative pull

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of energy with respect to the positive energy for the creation of the new galaxy in other zones in the universe).

The hollow sphere ( $m=0 \rightarrow e^{\uparrow}$ ) i.e. as the mass is getting into an negligible value or limiting towards zero value, the same is changing or taking a huge energetic value.

As per definition energy can neither be created nor can be destroyed; and similar is with the mass; just they get transformed into another domain.

Hence from the Einstein's Mass Energy Theorem Energy,

$$E = mc^2 / \sqrt{1 - v^2/c^2}$$

$E =$  Energy of the Mass (m) exhibited while rotating with velocity ' $\theta$ '

$\therefore$  if we consider

$$E \propto \theta^2 \Rightarrow E = K v^2$$

$K =$  constant; and the energy that is created in the black hole (opposite to universe); velocity; ' $\theta$ ' of the planets to be constant. While moving in an elliptical motion with this velocity, ' $\theta$ '; then we

can also say :-

$$E = mv^2 = m \cdot$$

(where  $k = m =$  constant for a particular celestial body having a fixed velocity ' $v$ '; exhibiting kinetic energy; ' $E$ ') that is; we find a new mass to be created by a value of Energy ' $E$ ' transformed to man; and the mass moving in the space with a velocity ' $v$ '. Thus, we can ultimately conclude that this man can take form of any kind of a celestial structure like as for an asteroid; a new planet; a new star or over a long and long light years later into a new galaxy.

The unsolved problem in the cosmos physics as:-

Why does the zero point energy of the vacuum not cause a large cosmological constant? What cancels it out?

$\Rightarrow$  In my explanation; it's quite observed that the zero point energy; i.e. the quantum vacuum zero point energy; is the lowest possible energy that a vacuum in the space can possess. We find thus; the value of ' $E$ ' as the zero point energy or the minimum potential energy for the creation of the new galaxy; i.e. the concept of cosmological constant with respect to the uncertainty principle that defines as in the cosmic world as; ' $\lambda$ ' (lambda); the value of the energy density of the vacuum of the space; creating a mass; ' $m$ '; a new mass of any celestial body or planets or ultimately to a new galaxy; i.e. the expanding of the universe from a zero-point quantum energy in vacuum of space; as a minimum potential energy of the creation of the new galaxy or expansion of universe.

Now the action or process of conversion of the zero point energy into a new universe or an expansion of the universe is at an energy level which is pointed out as the dark energy or anti gravity energy of the accelerating universe. The main properties of the dark energy thus infers that its anti gravitational function; is diluted much more slowly than the matter i.e. mass ' $m$ ' or as the expansion of the universe; as well; it conjugates or clusters much more weakly than the matter or man ' $m$ ' or as the expansion of the universe or perhaps it does not even occur; thus having a cancelling property with it as well; Thus we can say that the dark energy or anti-gravity energy is the repulsive force acting towards the zero point vacuum; energy of quantum fluctuations; thus making into a

larger cosmological constant in much many light years but forming into an accelerating universe; or a new man 'm' or new galaxy; thus this leads to the current standard model of cosmology known as Lambda-CDM model ( $\lambda$  lambda cold dark model) The  $\lambda$  CDM model is a parameter of the Big-Bang cosmological model in which the Universe which consists of a cosmological constant i.e. denoted by a Greek alphabet ( $\lambda$ )energy and cold dark matter (abbreviated as CDM). It is frequently referred to as the standard model of Big-bang cosmology because it provides a reason to the following aspects:-

- 1) Cosmic microwave background; its existence and its structure.
- 2) The large scale structure in the distribution of galaxies.
- 3) Abundant gaseous materials like Hydrogen; Deuterium; Helium and Lithium.
- 4) The accelerating universe observed in the light from distant galaxies and supernova.

### COVER LETTER:-

- (a) The computational Astrophysics and cosmology is a platform whereby any idea; research attributes; journals can be kept in copy right option.
- (b) The journal has been based in the fact that it is a hypothesis and its explanatory idea is taking a note on a five-co-ordinate system (in involvement of a new coordinate system called time- vacuum co-ordinate axes)
- (c) There is a potential competing interest on the fact that the dissertation violates certain principle of cosmology while its hypothetical explanation does not violate any kind of scientific basic principle.
- (d) Author:- Er. Ekta Deb hereby confirms the authenticity of the journal and hereby submits approval for the same.
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- (f) Name of cover letter:-  
A five dimensional co-ordinate system is a hypothetical approach towards in formation; destruction and recreation of a new galaxy ; in cosmos mars , a planetary body creation.

### AVAILABILITY OF DATA AND MATERIALS:-

Matter of the subject falls under Astronomy Materials :-

- (a) Vacuum Energy- Wikipedia
- (b) Cosmological Constant-Wikipedia
- (c) Zero-point Energy- Wikipedia
- (d) Dark- Energy- Wikipedia
- (e) Lambda CDM model-Wikipedia.

This journal is a brief report that may not cover standard Research but this is of general interest to the broad readership of computational astrophysics and cosmology.

### AUTHOR'S CONTRIBUTION:-

The author Ms Ekta Deb is to be qualified as an author for below mentioned reasons. She has been making substantial contribution to new concepts and acquisition of data with a prior analysis and interpretation of the Sci-fi facts. Both the author and the co-author are involved in drafting the manuscript or in parallel revising the same to make the journal into a critically intellectual content best for information to the readers. The author confirms the final approval for publishing the journal in its 1st version. Both the author and the co-author agrees to be made questionable for the accuracy; integrity doubt clearing and further participation of ongoing research on the same idea in other relevant section.

### ACKNOWLEDGMENT

The journal has been dedicated to my grandmother Late Minati Prava Paul and to my grandfather Late Phani Bhusan Paul. Besides the following members of my family; my father Mr Ankus Deb, was a part of the ever widening circle of the making the broad readership article that allowed me to convey in this with best cosmological and Sci-fi facts to entertain a good knowledgeable reading to the readers.

Besides ; Dr Bhaskar Mukherjee ; Kolkata, West Bengal; India is paid due honour from me for uplifting of my creative vision; which had ultimately captured this readable journal starting from a niche to a new dimension of the cosmic world; Last but not least; I would like to mention my Dr. Soumya Chatterjee who had supported me in every extension of my logical reasoning and unveiled it through graphics and thus helped me to unite the discoveries of science w.r.t the Big

Bang Theory.

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