

Singularity Bombardment by Superparticles

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ABSTRACT: In the present work, the gravitational acceleration on the surface of a black hole singularity, and the gravitational potential energy of superparticles at any Height from the external surface of the singularity sphere could be determined by using the original mathematical equations of Physics. The singularity has a huge density, an intense electromagnetic field, and a powerful gravitational field. The radius of a singularity equal to the radius of an atom or subatomic particles, but its mass and density are incredibly high enough to attract or tear apart any state of matter and energy. A nuclear fusion ball is produced in an accretion disc from violent collisions, heating up, and friction of ordinary matter particles, and it could be dropped and compressed steeply inside an event horizon of a black hole due to strong gravity, and powerful singularity tunnel waves to form superparticles from its collapsed core. Superparticles are white and smooth balls of ultra-massive particles, similar in size to subatomic particles. Their masses are comparable to those of rocks, planets, stars, galaxies, galaxy clusters, and the visible universe, depending on the mass gathered and the environment that produces them. The Materials and particles orbit the black hole singularity actively, which leads to an increase in the friction and collision of the black hole particles. The radius of a superparticle is similar to the radius of subatomic particles, but the density, spinning speed, angular momentum, gravitational field, electromagnetic field, rotational energy, thermal energy, temperature, and kinetic energy of superparticles are enormously different. The mass and density of a Black hole Singularity increased because its surface was bombarded violently by superparticles. The superparticles are the main fuel for feeding the black hole singularity, increasing its mass, density, and are crucial for extending the size of a black hole and enhancing its stability.

KEYWORDS: Black hole Particles; Superparticles; Singularity Detection; Singularity Bombardment.

1. INTRODUCTION

Black hole physics is an important branch of physics and astronomy was developed lastly to describe the weird objects and particles in nature that named black hole particles and black hole singularity. The Physical equation can work under any environment, specifically black hole singularity conditions, after its mass, radius, and density have been determined. The mathematical language of Physics is capable of describing the phenomena that occur in the depths of a black hole extremely. Scientists divide black holes into low mass black holes and high mass black hole. Black dwarfs and stellar mass black holes are formed from ultimate death of stars. In the heart of a galaxy contained a supermassive black hole [1][2]. Mass of black holes changeable to ten times or million times higher than the mass of stars [3]. Nuclear fusion sphere in the heart of dead stars will collapse inward to produce singularity ball with a density about ($2 \times 10^{60} \text{ kg/m}^3$). The radius of a black hole singularity is not zero, but very small such as the radius of atom or subatomic particles. Singularity density incredibly high because much amount of mass and energy compacted into such tiny point. Spacelike curvature, geodesics, and singularity concept had been discussed in quantum black hole and general theory of relativity [4][5]. Death of solar mass star will give a birth to white dwarfs and black dwarfs [6]. High mass black holes were formed from ultimate death of high mass stars [7]. In the

heart of any type of a black hole contain a dense ball that named a singularity. High mass black hole has denser ball of a singularity at its heart, and larger event horizon radius. Singularity is the dense heart of a black hole, and event horizon is the cover of a black hole that distorted hardly under the stress of a singularity ball. All types of black holes consist of two main regions are singularity located in the centre of a black hole and event horizon that covered a singularity from outside. Accretion disc is an external ring of an accumulated matter and energy that orbits a black hole actively when black hole tearing fraction of materials from companion stars and any other celestial objects [8]. Nuclear fusion ball and Superparticles maybe formed from violent collisions, fusion and compression of gas and dust particles inside the accretion disc and an event horizon. Dust and gas particles orbit the black hole singularity urgently, the probability of their friction, and collisions increased that led to increase the luminosity, and temperature of such excited particles to thousands, millions, and billions degree Celsius. The thermal radiation pressure and gravitational pressure prevent the singularity from collapsing inward anymore. The hydrostatic balance between gravity and temperature of a black hole singularity keeps the singularity in the size of atoms and within different masses. The tussle between gravity and temperature enhanced the stability of a singularity. The increment and decrement in the temperature or the radius of

a singularity directly changed the energy, spinning speed, and angular momentum of it.

Main objectives of this study to calculate the gravitational acceleration g of free-falling objects on the surface of a black hole singularity, and Gravitational Potential Energy GPE of Superparticles that fall down freely from any height and distance of the surface of a singularity by using mathematical laws of Physics.

2. BLACK HOLE PARTICLES

Black Hole particles are still mystery and illusion in the history of science and astronomy. Black hole contained in its centre a massive and dense object named a Singularity. Most mass and density of a black hole could be combined in the singularity ball. An event horizon and accretion disc of a black hole are warping strongly under the singularity pressure and its gravitational effect. Singularity is filled with a collapsed and compacted type of matter and energy, where vacuums and intermediate distances among its stuff close to zero, but not zero anyway. All types of forces in nature are combined together inside a singularity ball. Singularity could form a new mixed type of force in nature that worked strongly to capture any types of matter and energy, or destruct them into other state of matter and energy or devour anything to grow more and more. Singularity has high tides and attraction force on any neighbour objects, it may combine particles or make them to collide together to form new particles much denser and powerful. Fabriton particles that named Dark Matter Particles are fantastic particles in the structure of a dark matter that build up the structure of a whole Universe. In fact, the structure of a visible Universe, Solar system, our galaxy the milky way, Stars, planets, atoms and event horizon of a black hole is filled with dark matter particles. The space among planets, satellites, and comets of a Solar system is filled with dark matter particles and kept the whole solar system from ultimate evaporation [9]. Fabriton particles is main controller and protector that kept whole visible Universe from evaporations and prevent it from direct collisions and destruction. Gravitational lensing studies, galactic and stellar dynamics are clear evidences for the existence of dark matter particles, all these phenomena of nature and others are caused by dark matter particles when they are warping and combined together under high mass objects, such as event horizon of a black hole is warping steeply under an effect of a dense singularity ball [10]. The singularity is deeply drowned into the fabric of Cosmos because of its great mass, density, gravity, and spinning speed. Light bending of stars and galaxies are caused by gravitational field of black holes. Dark matter is warping strongly under the singularity stress. Fabriton particles of a black hole were combined and collided together to critical distance even light particles can't pass among them easily. Fabriton particles are warped and combined together in very tiny distance by gravitational lensing of a black hole singularity. Fabriton Particles are connecting and combining

together inside an event horizon of a black hole that obstacle the transition of most photon particles, as a result most of photon particles are captured and get freezing for a longer time inside an event horizon, it is main reason that so difficult to see the singularity surface because photon particles are mostly failed to leave the external surface of a singularity. Photon particles capable of leaving the surface of a black hole singularity only during bombarding its surface with super particles when tunnel vacuum formed temporary during a rapid transition of super particle that collided with a singularity directly, and let the photon particles to escape from external surface of a singularity and travel throughout the vacuum of tunnel instantly.

Black hole particles consist of dust particles, gas particles, Fabriton particles, Photon particles, antimatter, subatomic particles, Super Particles and massive singularity that immersed deeply into the heart of a black hole. Different types of matter and energy are participating in the formation and evolution of a black hole. Black hole is the greatest particles collider. Fabriton particles are distorted under an influence of a singularity mass and its huge density. Fabriton particles are combined together inside the structure of an event horizon, other particles are attracted and sucked into the singularity to feed it with an additional mass and energy. Singularity has great attraction and repulsion force that led to capture and suck particles from an external disc of a black hole. Accretion disc is an external region and boundary of a black hole where most of subatomic particles and photon particles are captured, accelerated, and collided together inside this turbulent zone. Radiation particles has different wavelength and speed when passed through the fabric of Universe. Subatomic particles are in violent collisions and acceleration state when exposed to powerful tidal force of a black hole. Materials in an accretion disc of a black hole may orbit a black hole with higher speed or collide together randomly. Powerful collision of particles inside accretion disc will increase the temperature of accretion disc to many million or trillion kelvins. Powerful collisions, frictions, and combination of particles inside an accretion disc or event horizon region will produce new massive and dense type of particles named Super Particles. Super particle is new state of matter and energy that formed only in a violent environment, especially inside a black hole. Inside a black hole or in its edge the materials are in great distortions, tidal disruptions, motion, and collision, where an ordinary matter and energy are collided and compacted together to form much denser and hotter type of matter or particle which named the super particles. Super Particle can be created inside an event horizon of a black hole violently, and it is only a weird particle that formed in the nature, it has enough capacity, spinning speed, and velocity to break the thickness of an event horizon to collide directly with a black hole singularity. Super particle is an energetic particle that collided with an external surface of a singularity to feed it and being its main fuel. The low mass black hole may grow and glow more to

increase its radius and become high mass black hole when its singularity bombarded with huge numbers of super particles during its journey inside the fabric of a Universe.

The black hole singularity has powerful gravitational field to drag super particles from its surrounding, and contained intense electromagnetic field that protected the singularity ball from destruction and evaporation, as a result most of super particles are reflected from an external surface of a singularity during direct collision. Black hole singularity and super particles are acting on one another as two positive particles like two protons when their surfaces in closer distance from one another. Black hole singularity has powerful rotational energy and electromagnetic force that working together as monster to squeeze and stretch the compacted fabric of a black hole to suck black hole particles in its surrounding and repulse them to be ripped apart and crashed inward to form nuclear fusion ball and drags it inward actively to be much compact ball that named a super particle. The super particle has similar properties of a black hole singularity. Super particle is dense and massive particle in the size of atom or subatomic particle which able to increase on its rotational energy, electromagnetic energy and momentum to capture additional mass and particles from its surrounding and grows as a new monster of nature. Super particle able to make a powerful tidal force in the black hole or tides with a singularity by its powerful gravitational waves and electromagnetic force. The rotational energy and surface temperature of both singularity and super particles may increase rapidly during their tensions with one another by violent tidal forces and electromagnetic force effects. The smoothness and whiteness of a singularity ball and super particles will increase enormously when tension and tidal effects are progressed among them. The singularity tunnel waves will make squeezes and stretches in the fabric of a black hole to be much violent and strong during powerful tensions of the black hole particles.

3. BLACK HOLE SINGULARITY

Black hole singularity is much compacted and dense celestial object that discussed by scientists during the history of science and astronomy. Singularity divide according to black hole's mass and size into two main types are Low mass black hole singularity, and high mass black hole singularity. Singularities had been formed from remnant core of dead stars, the Low mass black hole singularity was formed from the death of a low mass star, especially solar mass star, and high mass black hole singularity was created from the remnant core of a high mass star that exploded violently and rapidly which named a supernova. Supernova is a violent explosion of high mass star after its fuel of fusion was exhausted entirely. Black hole singularity is a theoretical celestial object that discussed in general relativity, relativity or space time curvature is the theory of black holes, singularity, and gravity [11]. Stellar mass black hole was formed from ultimate death of high mass star; the radius of

stellar mass black holes are many times the radius of a solar mass black hole. Solar mass black hole has radius about 3 kilometers. Low mass black holes and High mass black holes are swallowing materials and photon particles from its surrounding to grow, and expand in the next steps of evolution, an example is a Supermassive black was developed from stellar mass black hole to become larger and monster black hole after collecting much enough mass and energy from its surrounding. Materials are spiralling and fall down deeply into the heart of a black hole that named a singularity. Black hole will expand upward and increases its radius when much enough amount of matter and energy devoured by black hole singularity.

In fact, a black hole singularity is a great regression region as compared to another zone of a black hole, where all types of matter and energy attracted, squeezed and fall down very actively into its centre to collide directly with an external surface of a singularity. Singularity has radius same as the radius and size of atoms and subatomic particles. Singularity is a very tiny sphere of a new compacted material, and energy that stabilized in the centre of a low mass black hole and high mass black holes. High mass black hole has higher mass and larger radius, but its singularity has radius in the size of atom or particle [12]. Supermassive black hole stabilized at the heart of a galaxy, and kept it from evaporation. Stars, gas, and dust particles in the centre of a galaxy orbit a supermassive black hole rapidly and violently. M87 contained at its centre a powerful detected supermassive black hole. Sagittarius A* is a supermassive black hole which located at the Centre of our galaxy the milky way. Galaxy disc was distorted and oscillated under an effect of a Supermassive black hole. Quasars and active galactic nuclei could be contained in their core much powerful supermassive black hole. Tiny and great black holes are feeding galaxies and whole visible universe with additional attraction force and gravitational waves that led to increase the brightness of quasars and galaxies. Scientists used the Gravitational waves of a black hole to observe the black hole, and calculate its mass, and its angular momentum [13]. In fact, the Singularity is a main source of distortions and gravitational waves for the whole structure of a black hole and its event horizon. Singularity has the capacity to make a tunnel vacuum in the heart of a black hole to capture additional mass from its surrounding, and it has the ability to make up powerful turbulences in the combated fabric of a black hole to repulse objects outward. The tunnel vacuum and gravitational waves that produced from attraction and repulsion force a singularity named a singularity tunnel wave. The rotational energy and momentum of a singularity is a main source of the gravitational waves of a black hole. Mass, density, radius, spinning speed, and momentum of a singularity ball are changeable. Singularity has an influence on event horizon, and accretion disc, and feeding them with powerful gravitational waves and tidal forces. An escape velocity of an object from external surface of a black hole is constant equals

to speed of light, but an escape velocity from an external surface of a singularity ball changeable according to mass, radius, and density of a black hole singularity. An escape velocity of an object from an external surface of the singularity is exceeding the speed of light. Radius of a black hole will increase with an increment of mass and density of a singularity ball. Radius of a singularity ball do not change very much, its radius same as the radius of an atom or subatomic particles, but its density incredibly increased. Tidal disruption of stars occurred by black holes, especially by super massive black holes [14]. Super massive black hole has singularity at its heart incredibly massive and dense. Super massive black holes have larger event horizon radius and hot accretion disc of material. Galaxy M87 is active galaxy, it has a super massive black hole at its centre [15] [16].

The singularity of a solar mass black hole has a mass and density which compressed into the size of a hydrogen atom. The singularity of a solar mass black hole has huge density equals to $(3.2 \times 10^{60} \text{ kg/m}^3)$ when all mass of Sun converted to a black hole singularity and combined in very tiny point in the size of a hydrogen atom. Super particle in real competition against a black singularity for its well-known density and spinning speed. Super particle only particular type of particle has enough capacity to swim against powerful gravitational waves and turbulences that occurred from deep heart of a black hole as a result of rapid spinning speed and rotational energy of a black hole singularity. Singularity may able to make up a narrow tunnel in the compacted fabric of a black hole to capture additional mass and energy from its surrounding. Singularity tunnel waves are so strong and violently even subatomic particles could not break up the compact gravitational wall of a black hole to reach the surface of a singularity easily. Super particles are only dense and powerful particles were formed during strong collisions and compression of dense state of matter and energy which able to rotate rapidly to reach the deep heart of a black hole and collide directly with the surface of a black hole singularity. Singularity tunnel waves are main sources of attraction forces and repulsion forces for any types of black holes. Powerful gravitational waves and turbulences are formed from fast spinning speed of a black hole singularity and propagating such ripples outward throughout an event horizon sphere and accretion disc. Gravitational tunnels waves of a black hole singularity is acting steeply on the acceleration and deceleration of the black hole particles inside an accretion disc and an event horizon. Gravitational acceleration $\mathbf{g}$ of the free fall objects with mass $\mathbf{m}$ on an external surface of a high mass object $\mathbf{M}$ as shown as below:

$$\mathbf{F} = m\mathbf{g} \quad (1)$$

$$\mathbf{F} = G \frac{Mm}{r^2} \quad (2)$$

From equalizing equation (1) and equation (2) we shall get:

$$\mathbf{g} = G \frac{M}{r^2} \quad (3)$$

where, $\mathbf{F}$ is a gravitational force, $\mathbf{G}$ is a Gravitational Constant, it is constant in any place in the Universe, $\mathbf{G} = 6.673 \times 10^{-11} \text{ N m}^2/\text{kg}^2$, $\mathbf{M}$ is the mass of a black hole Singularity or the mass of any massive celestial object, and $\mathbf{r}$ is its radius or $\mathbf{r}$ is the distance between the two point-like masses, $\mathbf{g}$ is a gravitational acceleration of an object that falls down freely on the surface of massive objects such as on the surface of a singularity, Earth, stars, planets and Black holes, and it is changeable according to mass, radius, and density of the massive celestial objects. Gravitational acceleration $\mathbf{g}$ is the acceleration of an object in free fall within vacuum and without the resistance of air or the influence of an external force. Gravitational acceleration on the surface of a black hole singularity has a great value. Gravitational acceleration $\mathbf{g}$ of a falling body with mass $\mathbf{m}$ that falls down directly on the surface of a black hole singularity with a solar mass ($M = 2 \times 10^{30} \text{ Kg}$) and hydrogen radius ($r = 5.3 \times 10^{-11} \text{ m}$) is very high about ($\mathbf{g} = 4.751 \times 10^{40} \text{ m/s}^2$). Potential energy and kinetic energy of an object in the edge or on surface of a black hole singularity are incredibly high, for this reason super particles have powerful energy and momentum in the edge of a singularity. Super particle may able to fall down directly to collide with a singularity and converting its potential energy into turbulences, internal energy and thermal energy. To get the total work done $\mathbf{W}$ by an external force $\mathbf{F}$ to bring point mass $\mathbf{m}$ from an infinity ($\mathbf{r}_{i=\infty}$) to the final distance ($\mathbf{r}_f = \mathbf{r}$), for example $\mathbf{r}$ is the radius of an Earth or black hole singularity of the two mass points, the force is integrated with respect to displacement as shown as Following:

$$\mathbf{W} = \int_{\infty}^r \mathbf{F} d\mathbf{r} \quad (4)$$

Substitute equation (2) into equation (4) yields to:

$$\begin{aligned} \mathbf{W} &= \int_{\infty}^r G \frac{Mm}{r^2} d\mathbf{r} = \int_{r_i}^{r_f} G \frac{Mm}{r^2} d\mathbf{r} = \int_{\infty}^r GMm r^{-2} d\mathbf{r} \\ \mathbf{W} &= -GMm \left(\frac{1}{r_f} - \frac{1}{r_i} \right) = -GMm \left(\frac{1}{r} - \frac{1}{\infty} \right) \end{aligned}$$

Where ($\frac{1}{\infty} = 0$) is an initial radius that equals to an infinity, thereafter rewrite above equation as blow:

$$\mathbf{W} = -G \frac{Mm}{r} \quad (5)$$

Where little mass $\mathbf{m}$ of an object is moving near the surface of a much larger object with mass $\mathbf{M}$. Since the work done $\mathbf{W}$ is stored as its potential energy $\mathbf{PE}$, the gravitational potential

energy at a point which is at distance r from the source mass is given by:

$$GPE = -G \frac{Mm}{r} \quad (6)$$

Gravitational potential energy of an object in a distance h from the external surface of a black hole singularity could be calculated by following equation:

$$GPE = mgh \quad (7)$$

Where, **GPE** is a gravitational potential energy, **m** is the mass of an object at distance **h** from the surface of a singularity, **g** is a gravitational acceleration of an object that falls down urgently on the surface of a black hole singularity. Gravitation potential energy between singularity and super particles will increase when the distance r between them decreased, otherwise the gravitational potential energy was decreased step by step when the distance between singularity and super particles increased largely. Gravitational potential energy changeable according to mass and distance of objects. Potential energy is the stored energy of position possessed by an object inside the gravitational field. High mass of free-falling object and higher distance of them lead to higher gravitational potential energy. Applied mechanics is the important branch of science concerned with the motion of any object that can be experienced or perceived by humans without the help of instruments [17]. The potential energy and gravitational force are very low or zero when two bodies are far away from one another or being in infinity distance from one another. [18] Gravitational energy in spherical symmetry, black holes, white holes and general definitions of gravitational energy are discussed.

4. SUPERPARTICLES

Superparticle is a dense and compact particle in the nature. Density of a superparticle may exceed the density of a black hole singularity in particular states during its rapid transition into the deep heart of a black hole to collide with a singularity ball. In fact, a black hole singularity is a well-known object that has a density higher than any celestial object. Super particle has radius same as the radius of subatomic particles, but its density equal to the density of a black hole singularity or less than it slightly. Black hole structure is very dense and compacted, even photon particles and subatomic particles are arrested and accumulated inside its structure. Light particles and subatomic particles are captured in a dark prison of a black hole, especially inside event horizon region where all types of particles in continuous freezing for a longer time. Photon particles and subatomic particles do not have enough energy to move through the thickness of an event horizon, they are in actual prison were captured for unknown time. Photon particles are in continuous collisions and bounce among dense particles and compacted fabric of a black hole. Subatomic particles are

much needed to gain an additional energy to break the dense gravitational wall of a black hole. An Event horizon of a black hole has very compacted fabric of Fabriton particles that distributed around a singularity sphere. Fabriton particles in the fabric of a black hole are in critical distances and direct collisions even photon particles couldn't pass among them easily. Fabriton particles are big obstacle and gravitational wall in the path of particle's motion. Subatomic particles and photon particles do not have much enough mass, density, and energy to break the gravitational barrier of a black hole, especially the gravitational barrier of an event horizon. Super particles have enough mass, density, momentum, and energy to break a gravitational wall of a black hole. Super particles have enough mass, density, energy and angular momentum to leave a black hole or fall down directly into the heart of a black hole. Super particle may collide with a singularity or leaves it forever. Black hole Singularity is bombarding violently by super particles, it is only the method and dynamic to grow and develop a singularity ball rapidly. Mass and density of a black hole Singularity increased quickly when much enough number of super particles collided with it. Superparticle is only successful method for feeding a singularity ball with additional mass and energy. Black hole has dense heart named a singularity, and event horizon is a dark sphere of distorted matter that covered a singularity [19]. The gravity of a black hole sphere is so strong even light particles and subatomic particles can't leave it easily. The black hole singularity is the place where all types of matter and energy crashed when reached there rapidly [20]. The mathematical procedure and general relativity theory was used to extend the space-time beyond the singularity of a black hole [21]. Super particles are formed naturally inside the compact and turbulence fabric of a black hole.

Superparticle was formed from violent collision of gas, dust particles, subatomic particles and photon particles inside event horizon zone and accretion disc of a black hole. Accretion disc is an external ring of excited and accelerated type of material that orbits the black hole actively, it was formed temporary when gas, and dust particles are fall down directly into capture of a black hole. Materials, gas, and dust particles are in strong motion, collisions, and friction which increased the temperature and luminosity of an accretion disc rapidly. Photon particles, and subatomic particles are strongly collided and combined together inside rotated accretion disc to form nuclear fusion ball. Nuclear fusion ball will produce super particle from its compacted heart during its rapid rotation and transition towards the core of a black hole. Super particles are formed from such violent collisions and combination of matter particles inside an accretion disc of a black hole. Mass, and density of Super particles may increase step by step when much number of particles are collided and combined together. Tiny and low mass superparticles are collided and combined together to produce heavier type of super particles. Heavier superparticle contained huge amount of mass and energy. Super particles will grow more and more

when collected enough amount of mass and energy from its surrounding. The mass, density, momentum, and energy of super particle will increase rapidly to collide with a black hole singularity and become part of it during its collision and entire evaporation. Spinning speed and kinetic energy of the super particles are high enough to break the potential barrier of a black hole and collide directly with a singularity. Singularity has much enough mass, density, gravity, tidal force, electromagnetic force and power to tear or destruct nearby black hole particles entirely in its edge or since collided with it directly.

A superparticle is classified into five kinds, including the Turbulent superparticle, Survived superparticle, Superparticle clusters, and Collided superparticle. The turbulent superparticle undergoes continuous turbulent motions inside the black hole, gaining and losing minimum or maximum amounts of matter and energy. The surviving superparticle can pass near the black hole singularity and escape from the powerful gravitational field of a singularity and black hole to release into space and become a singularity for newborn black holes. The superparticle clusters are groups of several superparticles that have been combined under a tremendous gravitational and electromagnetic field. The superparticle clusters can build up powerful binding energy and gravitational force to keep themselves from evaporation due to singularity tunnel waves. The bombarded superparticle is an excited, and energetic type of superparticle that hits the black hole singularity directly, collides with its external surface, and is immersed into its core to destruct there and feed it to increase its mass and its thermal energy. Eventually, several superparticles dropped on the surface of a singularity at once, these violent phenomena named **superparticles rain**. The Superparticles rain is a natural phenomenon when several ultra-massive particles, similar in size to subatomic particles with different masses, and those particles could be pulled inward suddenly into the core of a black hole to collide with its singularity.

4.1 Formation and Growth of Superparticles

Superparticles are formed in the accretion disc of a black hole after collision and combination of maximum numbers of subatomic particles, gas, dust particles, and accumulated photon particles. Black hole singularity has powerful rotational energy that acting directly on attracting matter in its edge, and participated in the formation of a pure tunnel around itself that led to attract and capture amount of mass from its surrounding. Accretion disc and event horizon of a black hole are warping and vibrating actively under tidal force of a singularity ball. An Event Horizon is a shell of compacted fabric of matter and energy around the singularity. The event horizon was raised up as cave and tunnel around entire singularity. Black hole singularity has powerful rotational energy, giant spinning speed, and angular momentum to make powerful turbulences in the fabric of cosmos. Powerful gravitational waves are formed from quick spinning speed of a Black hole singularity that propagating

directly throughout the fabric of event horizon and accretion disc. Material and subatomic particles in an accretion disc are absorbing continuously such powerful gravitational waves of a black hole singularity that led to increase the speed and temperature of particles. Material and subatomic particles in the accretion disc have the greatest thermal energy and linear momentum to collide together violently. Black hole is a compacted world of distorted and disturbed type of matter and energy.

Superparticles can be formed and grow during three steps such as: Particles Collision, Spinning and fusion of particles, and their rapid Transition Throughout an accretion disc and event horizon of a black hole. Superparticles could be formed during collision and condensation of huge amount of matter and energy inside accretion disc. Accretion disc is a shell of excited state of matter and energy that orbits the black hole sphere rapidly. Particles in the accretion disc have giant tangential speed to collide together violently and producing new types of massive particles. Thermal energy and kinetic energy of subatomic particles are very high that led to push on particles to collide together strongly. Particles may collide together violently and annihilate one another to produce new types of particles much denser and powerful than past subatomic particles. Particles collision in accretion disc incredibly high that led to mix the structure of subatomic particles to generate new kind of powerful particles named Superparticles. Superparticles much needed to increase its mass and density. Superparticle has the capacity to capture additional mass and energy from its surrounding when orbits itself rapidly. Spinning speed of superparticles incredibly high to make the tunnel in the fabric of a black hole and attracting enough amount of mass from its surrounding. High spinning speed of super particles may collect huge amount of mass, and devouring maximum numbers of dust, gas, photon, and subatomic particles to grow rapidly. Rotational energy and spinning speed of super particles are incredibly high to collect much enough amount of mass and energy inside accretion disc and event horizon region. Mass and density of super particles are high enough to move and transit through the compacted fabric of a black hole and collide directly with a black hole singularity in the very centre of a black hole. Repulsion force of a Black hole singularity and compacted fabric of event horizon are strongly pushed on particles to leave the black hole far away. Powerful tides and gravitational waves of a black hole singularity distributed through an event horizon and accretion disc. Normal particles could not break the potential barrier of a black hole to move from accretion disc and pass easily throughout an event horizon thickness. Particular type of particle that called super particle has enough ability to break the gravitational wall of an event horizon and collide directly with a singularity ball. Most of photon particles, subatomic particles, and ordinary matter are failed to a break potential barrier of a black hole and collide with a singularity. Super particles have much enough mass, energy, density, spinning speed, and angular

momentum to build up temporary tunnel in the compacted fabric of a black hole and fall down actively to collide with a singularity ball. Singularity in the heart of any black hole is bombarding by super particles. Super particles are main food of a black hole singularity. Singularity may grow rapidly when bombarded with maximum numbers of super particles. Mass, density, spinning speed, angular momentum, rotational energy, and gravitational waves of a black hole singularity will increase with continuous bombardment of its surface by super particles. Superparticles are only particular types of particles in the nature may able to reach the heart of a black hole and collide directly with a singularity ball. Superparticle is colliding with a singularity and destructed partially during its collision with it, it may become a part of singularity mass and energy or leave it forever since survived. An escaped superparticle may become a black hole singularity for the new born black hole.

4.2 Radius and Density of a Superparticle

Super particle has mass of normal objects, mountains, Satellites, Planets, Stars, Galaxy, and Universe, but its radius similar to the radius of atoms or subatomic particles. Super particle has properties similar to the properties of a black hole singularity. Super particles are formed from violent collisions of an ordinary matter and energy in the compacted world inside an accretion disc of a black hole. Inside an accretion disc and event horizon of a black hole materials are compressed and denser than any other familiar objects in the nature. Mass and density of a super particle maybe increased rapidly when it is spinning up urgently and falls down into the deep heart of a black hole. Angular momentum and density of a super particle increased generally, because of the powerful tidal force and gravitational waves of a black hole singularity. Super particle kept on its density and spinning speed to collect additional mass and material from its surrounding. Super particle radius equals to the radius of subatomic particles as shown as below:

$$(R_{\text{Superparticle}} \leq R_{\text{Subatomic Particles}})$$

Where $R_{\text{Superparticle}}$ is the radius of a Superparticle, and $R_{\text{Subatomic Particles}}$ is the radius of Subatomic Particles. Superparticle has spherical shape and high density looks like a singularity and compacted stars. The density of a superparticle could be calculated mathematically by following equation:

$$\rho = \frac{M}{V} = \frac{M}{\frac{4}{3}\pi r^3} \quad (8)$$

Where ρ is a density of any spherical objects such as Singularity ball, super particle, M is the mass of Super particle, V is the volume of Super particle.

$$V = \frac{4}{3}\pi r^3 \quad (9)$$

Where r is the radius of superparticle, super particle keeps its perfect spherical shape and momentum even during its urgent transition, powerful spinning speed, and momentum. If a Super Particle with a mass of Earth ($6 \times 10^{24} \text{ kg}$) and its radius similar to the radius of subatomic particle about ($1 \times 10^{-15} \text{ m}$), by using equation (8), the superparticle has incredible density ($1.433 \times 10^{69} \text{ kg/m}^3$). Superparticle only famous particle that formed in violent environment to compete with black hole singularity for its mass, density, momentum, and energy. The density and momentum of super particles in particular states exceeded the density and momentum of a black hole singularity. Superparticle is only particular type of celestial object competes with a black hole singularity according to its tremendous density, thermal energy, surface temperature, spinning speed, kinetic energy, electromagnetic force, and momentum. The nature much complicated and human comprehension still limited deals the fantastic phenomenon that occurred in the deep of a Universe.

4.3 Superparticles Transition

Superparticle formed from nuclear fusion ball that accelerated from accretion disc to swim against singularity tunnel waves towards the heart of a black hole to give birth with a new dense particle in nature named the super particle. Superparticle has enough, mass, density, energy, angular momentum, thermal energy, and kinetic energy to travel into the deep heart of a black hole or leave the black hole forever. Super particle with low mass and density may leave a black hole to propagate into the deep space of Universe. Super particle with lower mass and density may be failed to fall down into the deep heart of a black hole, it may stay inside event horizon zone or accretion disc shell to collect much enough mass, density, and angular momentum. Super particle with higher mass, density, angular momentum, rotational energy and thermal energy has much enough power to swim against the gravitational waves of a black hole singularity to reach the deep centre of a black hole. Singularity tunnel waves are so strong even subatomic particle could be annihilated inside accretion disc or failed to reach the heart of a black hole. Super particles are dense and powerful particle, they have enough capacity and energy to build rapid tunnels in the fabric of a black hole to collide with a singularity ball. Superparticles could be collided with a singularity ball and destructed here or lose some of its mass in direct collisions, collision with a singularity will deliver the ultimate fate of super particles. Super particles may be collided with a singularity ball and annihilated forever if its density lower than the singularity ball, or super particle could be collided with a singularity ball and reflected from its surface after collisions when density, angular momentum and electromagnetic field of such particular type of super particles much higher than the density and an electromagnetic field of a singularity ball. The survived super particles will bounce and escape from ultimate death during further collisions with a black hole singularity. Super particle with different mass

and density could be annihilated or escaped into the nature to live and improve for longer time when saved from ultimate death and annihilation. The surface temperature, central temperature, or central pressure of superparticles increases into millions or trillions of kelvins since being dragged rapidly to collide with a black hole singularity. The superparticle in turbulent motion inside an event horizon of a black hole is called a turbulent superparticle. The superparticle that pulled inward to collapse with a singularity due to a violent collision is called a fusible superparticle or bombarded superparticle. The superparticles are the main fuel and essential source of energy for the singularity, and enhance the entire stability of a black hole.

5. SINGULARITY DETECTION

Singularity could be detected in a first method when its surface bombarded by superparticle which permits the energetic particles to escape from the capture of a singularity throughout the turbulent tunnel that formed in the path of a super particle, second probability to discover the surface of a singularity during collecting and analysing the singularity tunnel waves that propagated from the deep heart of a black hole and observed by any professional technology. Singularity has huge density and mass that combined in very tiny point in the size of atom or subatomic particle named a Singularity point or a black hole heart. Stellar mass singularity, solar mass singularity, galaxy mass singularity, and cosmic mass singularity have same size or little bit changed, but radius of black holes with lower and higher mass are changed largely. Cosmic fabric matter and energy distorted and collided strongly around the tiny point of a singularity ball to save the dynamical balance of a black hole. Solar system gravitationally bound together and combined around a massive object in its centre is the Sun, electron orbits the nucleus of an atom, stars and planets are orbit the active nucleus of a galaxy, accretion disc and event horizon of a black hole orbit the singularity ball. In fact, the singularity and event horizon of a black hole have massive density and gravitational turbulences. An ordinary matter and energy get away from the centre of a black hole and failed to reach its core directly or failed to escape from powerful gravitational attractions of a singularity ball. Furthermore, an ordinary matter and energy are spiralling inward throughout an accretion disc and along the event horizon region to become much condense and compact to produce new state of matter and energy named a super particle. Super particle transition is one successful method to detect and survey a black hole singularity, because only super particles have enough mass, density, and energy to reach the heart of a black hole and collide with a singularity. Super particle can make a temporary tunnel in the fabric of an event horizon and light particles have an opportunity to leave the surface of a singularity easily and able to reach into our eyes and camera. Subatomic particles and photon particles do not have enough energy and power to leave the surface of a singularity and

penetrate throughout a compacted fabric of an event horizon. Photon particles are in continuous collisions and bounces between external surface of a singularity and compacted internal surface of an event horizon. Singularity may able to increase and decrease its spinning speed to capture additional material from its surrounding. Angular momentum of a singularity ball mostly changed rapidly, that led to pull or push objects inside event horizon of a black hole. Super particles will fall down directly to collide and combine with a singularity ball in the heart of a black hole and feed it with additional mass.

It is much difficult to see the surface of a black hole singularity. [22] Singularity is a dense part of a black hole, the deviation is a parameter that is responsible for the appearance of curvature singularity, which is not covered by a horizon. Naked singularity formation is a strong source of gravitational waves [23]. The singularity has rapid rotational energy that led to produce powerful gravitational waves in the fabric of cosmos. Naked singularity could be discovered only during bombardment its surface by super particles. The perfect spherical shape of a singularity ball could be delivered suddenly for short time when bombarded directly with powerful super particles. During Collision, temporary tunnel could be formed in the fabric of event horizon that permits some of photon particles to leave the surface of a singularity. Few numbers of photon particles may escape from a singularity surface throughout the tunnels were formed during rapid transition of super particles in the fabric of an event horizon that collided violently with a singularity in the Centre of a black hole. Super particle has enough power and density to build very tiny tunnel in the compacted fabric of a black hole when it passed actively through the thickness of event horizon and collided immediately with a singularity. Super particle may make a temporary tunnel in the fabric of a black hole and give photon particles limited chance to leave the surface of a singularity and travel back through the tunnels of super particles. Super particles or any other type of matter and energy will crash partially or immediately when collided directly with a singularity surface. Mass, density and gravitational field of a singularity ball will increase rapidly to generate a denser singularity ball and much powerful black hole that named a supermassive black hole when a singularity ball bombarded by super particles continuously.

There are two steps to survey the Centre of a black hole: first step the superparticle must pass through the fabric of a black hole to build a temporary tunnel in the structure of an event horizon, and second step photon particles with high frequency and enough energy may leave the surface of a singularity and move urgently at that moment through that tunnel which formed beyond the transition of a superparticle. Photon particles are able to leave a stellar mass singularity or stellar mass black hole urgently when its heart bombarded by superparticles, because the radius of a low mass black holes is not reaching 300,000 kilometers. Temporary tunnel was formed during rapid transition of a superparticle through the

fabric of a black hole inside event horizon sphere. Inside event horizon you have good chance to see the surface of a singularity ball when bombarded by superparticles and photon particles were reflected from an external surface of a singularity ball may reach your eyes through the temporary tunnels were formed during superparticle transition. Photon particles have the capacity to pass through an infinity space, ordinary matter, and through temporary tunnels were formed in the event horizon during rapid transition of super particles. Speed of light particle is 300,000 kilometers per second. Although of this great speed of light particle, but it is still so weak particle to pass directly through the compacted fabric of a black hole. Singularity is a squeezed ball which located at the heart of a black hole [24]. Black hole has its mass, momentum, charge, and powerful gravitational field [25][26][27]. The gravitational field of a black hole singularity much powerful than any object possesses in nature. Photon particles and subatomic particles are captured, crashed, and accumulated inside the disc of a black hole, because the photon has limited energy and momentum. Black hole is deeply immersed into the dark fabric of a Universe because the density of a black hole sphere incredibly high [28]. Neutron stars and white dwarfs are two compacted objects in the nature were formed from ultimate death of high mass stars and low mass stars. Black hole has the ability to build a tunnel in the fabric of Cosmos that acting directly on tidal disruptions of stars and stellar jumps [29]. Stars and planets will fall down actively towards the tunnel which formed during rapid motion of black holes through the dark fabric of a Universe. Black hole may make tunnel and waves in the fabric of Universe that produce powerful gravitational waves and turbulences in the structure of a dark matter.

6. ENERGY AND MOMENTUM OF SUPERPARTICLES

The black hole is very compacted system of matter and energy that make matter, atoms, and particles to be squeezed and stretched in critical space, as a result an intermediate distance among matter and energy very low and narrow for an object to pass throughout the structure of a black hole required the huge density and energy to break such compacted world. Celestial objects must be squeezed inward to be denser more and powerful to swim inward into the deep heart of a black hole where the powerful gravitational waves come out inversely from the heart of a black hole that throws out any object which located in its direction. The black hole is breathing when its sphere squeezed and stretched continuously like lungs and heart of human when filled and evacuated by blood and oxygen gas. Size and shape of a black hole are changeable, it is squeezed to pulls in the additional mass from its surrounding or stretched to give energetic particles enough chance to escape from a black hole forever.

Superparticles have enough mass, density, spinning speed, momentum and energy to travel in the compacted fabric of a black hole [30]. Superparticles are weird particles

and capable of breaking the big thickness of event horizon to reach immediately into the heart of black hole or leave the surface of black hole into space forever. Fabriton particles are distributed in the structure of atoms, the universe, and black holes to enhance their stability [31]. The Fabriton particles compressed together, and the distance among them reduced inside an event horizon of a black hole, as a result, the photon particles are trapped and dissipated inside a black hole, and the event horizon becomes a dark and black sphere. Most of particles are failed to leave an event horizon of a black hole, for example photon particles and subatomic particles are bounded inside the compacted fabric of a black hole for unknown time. Photon particles orbit the black hole, because of the powerful gravitational field and super density of a black hole. Subatomic particles are binding to a black hole or collided together roughly when orbit the black hole in the accretion disc. Both of photon particles and subatomic particles had been captured and accumulated inside the compacted fabric of a black hole, particularly inside event horizon region or between singularity and internal surface of an event horizon. If you travel through an event horizon zone you shall see clearly some bright and dark regions inside it, because of some particles and subatomic particles were captured and accumulated here for a long time. Superparticle has much enough momentum and energy to spiral around the heart of a black hole and left beyond itself several photon particles. Superparticle in its journey inside a black hole may able to capture some photon particles or subatomic particles. Superparticle still has good chance to grow more inside the compacted fabric of a black hole when gathering additional amount of mass from its surrounding, also it may able to make a tunnel in the fabric of Universe or inside the event horizon region and accretion disc to grow urgently and orbit the singularity. An Event horizon of a black hole is not dark or black 100%, it is filled with an accumulated and annihilated subatomic particles, photon particles, and super particles. In fact, Event horizon region is still dark and luminous at same time, but particles much required to a huge energy and frequency to leave it in the future. An External surface of a singularity is very white, smooth, and hot, unfortunately photon particles do not have enough energy to leave the surface of a singularity or reach into our naked eyes directly. The shape and colour of a singularity ball are big illusions and hopelessness in the history of science and singularity theory. Best method to see an external surface of a black hole singularity only possible by travelling inward the super particles to collide with singularity and photon particles are coming back instantly from the surface of a singularity through such tunnels were formed during rapid transition of superparticles towards the singularity.

Following the formula of an equation that used to draw the effect of a black hole Singularity and Superparticle transition on the formation of much powerful distortions and turbulences in the structure of a black hole and Cosmic Fabric:

$$Z = \frac{\coth(x^2 + y^2) * \tan(x^2 + y^2)}{2000} - \frac{1}{\cosh(x^2 + y^2)} \quad (10)$$

Where Suppose $(-\pi < x < \pi, -\pi < y < \pi)$, or it can be written in following mathematical form: $-\pi < x < \pi, -\pi < y < \pi$.

By using MATLAB Program, and using Eqn. (10) to draw the effect of a Black hole singularity on the forming tunnels and powerful curvatures in the compacted fabric of a Black hole and event horizon. Dark fabric matter is vibrating actively under the stress of a Singularity and super particles. Super particles may able to make temporary tunnels and turbulences during its rapid transition and direct collisions with a black hole singularity. Singularity in the heart of a black hole is a white compacted sphere of a collapsed new type of matter and energy, it has the capacity to increase its angular momentum and able to make powerful distortions, ripples, tunnels and gravitational waves in the fabric of Cosmos to capture much numbers of super particles from its surrounding inside an event horizon or accretion disc. Singularity has perfect mass and density much higher than mass and density of superparticle. The speed of super particles may increase rapidly in the edge of a black hole singularity to orbit the black hole singularity very quickly, and it will make normal distortions and turbulences in the dark fabric of Universe. Fabriton particles are compressed and combined together under high stress of singularity and super particles to make compacted Dark fabric matter and prevent the light particles to leave the surface of a singularity directly or leave an event horizon rapidly. The survived super particle has another opportunity to grow and glow when it is gathering additional mass and energy from its surrounding

and being a singularity for new born black hole. Super particle able to grow rapidly and become as singularity for its new born black hole when collecting amount of mass and particles from its surrounding like any black hole singularity.

Superparticles are only well-known particles that formed and developed inside a black hole to collide with a surface of a black hole and destruct during its Collision. Most super particle will collide with an external surface of a singularity and feeding it to increase its mass, density, gravity, thermal energy, electric and magnetic field, and its turbulences. Photon particles may escape from an external surface of a singularity and able to travel through the temporary tunnels were formed during collision of superparticles with a singularity. The Travelling speed, kinetic energy, thermal energy, surface temperature, spinning speed, momentum, and rotational energy of super particle will increase rapidly during its transition to build temporary tunnel inside the compacted fabric of a black hole and collide with a singularity in the heart of a black hole. If a collided superparticle has a lower density that much lower than the density of a singularity it will crash entirely to become a part of a singularity mass, otherwise if a collided super particle has a density much higher than the density of a black hole singularity may immerse deeply into the deep heart of a singularity to increase its mass, density, and gravitational energy. The radius of an event horizon of a black hole will increase with an increment in the Mass and density of a singularity, especially after bombardment the singularity surface by additional super particles. Surface temperature of a super particle will increase and its colour may change from red, yellow to blue and white during its rapid rotation and transition to collide directly with a singularity in the deep heart of a black hole.

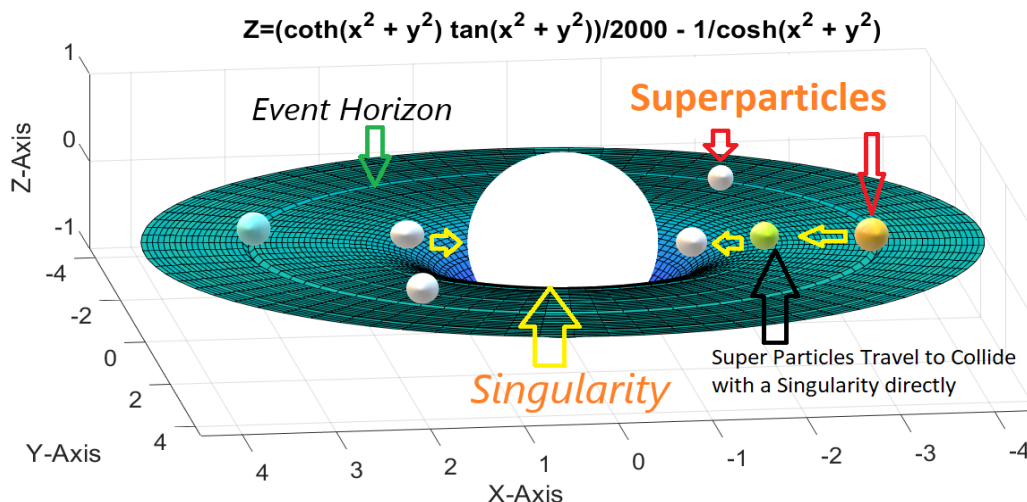


Figure 1 Black Hole Singularity Bombarded by Superparticles.

7. RESULTS AND DISCUSSION

Black hole singularities have different size, masses, density, gravity, radius, an escaped velocity, gravitational acceleration and potential energy according to method and dynamic of a formation and transition of a black hole singularity. Super

particle has huge kinetic energy and maximum spinning speed to travel in the compacted fabric of a black hole when started in its journey from accretion disc and collided directly with a singularity in the heart of a black hole. Superparticle has mass and radius much smaller than the mass and radius

of a black hole singularity. Black hole singularity was formed during an ultimate death of stars and the formation of black holes [32]. Singularity tunnel waves are acting directly on the squeezes and stretches of a black hole where the black hole particles are vibrated, attracted, repulsed, stretched, and squeezed violently. The density of a black hole and its singularity may increase rapidly during bombardment the heart of a black hole with much energetic particles named a superparticle. Superparticles are only particular type of particles in the nature formed violently to collide with the surface of a singularity to increase its density and its surface temperature. Solar mass black hole has radius 3000 meters, mass equals to $(2 \times 10^{30} \text{ kg})$ and its radius similar to the radius of hydrogen atom $(5.3 \times 10^{-11} \text{ m})$, gravitational acceleration on the surface of a solar mass singularity about $(4.751 \times 10^{40} \text{ m/s}^2)$, a Super Particle with a mass 3000 kg that falls down from height 2 meters of the surface of a solar mass singularity has very high gravitational potential energy about $2.8506 \times 10^{44} \text{ J}$. Radius of black hole and density of a black hole singularity are changeable according to mass and momentum of a singularity and black hole. Black hole singularity with a mass of Earth $(6 \times 10^{24} \text{ kg})$ and its radius similar to the radius of atomic nucleus is about $(2 \times 10^{-15} \text{ m})$ has a gravitational acceleration $(1.00095 \times 10^{44} \text{ m/s}^2)$. If a super particle with mass (200 kg) falls down from height (2 mm) of the surface of Earth's mass singularity, it possesses a gravitational potential energy about $(4.0038 \times 10^{43} \text{ J})$. Gravitational potential energy is the energy an object or super particle possesses because of its position in a gravitational field or its height on the surface of a black hole singularity. Black hole singularity with a mass of a star $(2 \times 10^{31} \text{ kg})$ and its radius similar to the radius of atom (231 pm) has a gravitational acceleration $(2.50 \times 10^{40} \text{ m/s}^2)$. If a super particle with mass (200000 kg) falls down from height (20 meters) of the surface of a stellar mass singularity has a powerful gravitational potential energy about $(1.00043 \times 10^{47} \text{ J})$.

In fact, a singularity with a mass of million stars $(2 \times 10^{36} \text{ kg})$ and its radius similar to the radius of an atom (126 pm) has a powerful gravitational acceleration $(8.406 \times 10^{45} \text{ m/s}^2)$. If a super particle with mass (4000000 kg) falls down from height (20000 meters) of the surface of a supermassive singularity has a powerful gravitational potential energy about $(6.7248 \times 10^{56} \text{ J})$. High mass singularity and black hole have larger event horizon and denser collected material in the accretion disc. Super particles with high mass and density may collide with a singularity of such massive black holes to increase the density of a singularity and enlarge the radius of a black hole. Black hole singularity with a galaxy mass $(2 \times 10^{41} \text{ kg})$ and its radius similar to the radius of an atom (60 pm), it has a gravitational acceleration on its surface $(3.7072 \times 10^{51} \text{ m/s}^2)$. If a super particle with mass (4000000000 kg) falls down from height (2000000 meters) of the surface of a singularity, it possesses a powerful gravitational potential energy about

$(2.9657 \times 10^{67} \text{ J})$. Furthermore, a Black hole singularity with a mass of a visible Universe $(2 \times 10^{53} \text{ kg})$ and its radius similar to the radius of an atom (20 pm), its gravitational acceleration on its surface about $(3.3365 \times 10^{64} \text{ m/s}^2)$. If a superparticle with the mass of stars $(2 \times 10^{31} \text{ kg})$ falls down from longer distance $(4 \times 10^9 \text{ m})$ of the surface of a cosmic singularity, it has a stronger gravitational potential energy about $(2.6692 \times 10^{105} \text{ J})$. Eventually, a Black hole singularity with a mass of a compacted Universe $(2 \times 10^{60} \text{ kg})$ before a big bang accident, the density of our Universe was very high and its radius similar to the radius of a proton particle (1 fm), it has a gravitational acceleration on its surface about $(1.3346 \times 10^{80} \text{ m/s}^2)$. If a superparticle with the mass of a galaxy $(2 \times 10^{41} \text{ kg})$ falls down from height $(4 \times 10^{15} \text{ m})$ of the surface of a cosmic mass singularity, it possesses a stronger well-known gravitational potential energy about $(1.06768 \times 10^{137} \text{ J})$. High mass black holes and denser singularity have powerful gravitational acceleration and gravitational potential energy capable collecting huge amount of matter and energy from its boundary to grow and glow violently as a bigger monster in the nature.

High mass black hole singularity may produce superparticles with greater mass and energy, otherwise a low mass singularity and black hole capable of making superparticles with minimum mass and energy. Our visible universe and multiple universes could be formed inside a Supergiant black hole under higher pressure, huge temperature, and violent quantum fluctuations, and escape into infinite space as surviving superparticles to grow and expand, and form stars and galaxies as our visible Universe. The surviving superparticles are seeds to form newborn black holes, but cosmic seeds escaped, evaporated, and expanded to form stars, planets, galaxies, and the visible universe. The cosmological redshift by radio telescopes has confirmed the expansion of the universe and the origin of cosmic rays detected by the microwave background [33]. The mass and energy of a cosmic mass superparticle high enough to form a new universe at a distant point from a Supergiant black hole. The supergiant black hole is a black hole with huge mass, density, gravity, the largest event horizon, and a supermassive singularity located inside its core. The Superparticles with huge mass and density, with a mass of the visible universe, could be formed inside the supergiant black holes. The multiple universes with a mass of our visible universe lower or higher than its mass still formed inside it and ejected into space to give birth to a newborn universe. The superparticle with enough mass, density, energy, speed, and momentum could be formed inside a supergiant black hole and escape into space to form a new universe similar to our visible universe. The supergiant black hole has a mass more than the mass of trillions of visible universes, and it is the common center of gravity and creation for multiple universes, including our visible universe. The supergiant black hole is the parent of our visible universe and other neighbouring universes that have been formed in the supergiant black hole

and propagated into infinite space. We are nice children of the supergiant black hole and the visitors of infinite space.

In this study, I need to explain the details of a black hole singularity and superparticles with lower and higher masses, such as the mass of rocks, planets, stars, galaxies, and the visible universe. I have calculated the gravitational acceleration and gravitational potential energy of the dropping objects on the surface of a black hole singularity, specifically superparticles. The universe was formed as the greatest kind of superparticles inside the largest type of supergiant black hole before 13.8 billion years ago, and escaped into infinite space, a surviving superparticle to evaporate and make our visible universe with new galaxies, stars, and planets. The multiverse, as our visible universe, is born inside the largest type of supergiant black holes due to the violent conditions of such compacted state of matter and energy. The dark fabric matter and energy, and the bright

ordinary matter and energy, are compressed and deformed inside the supergiant black hole to form a denser type of superparticles in the size of subatomic particles and within the mass of the whole universe. Those superparticles can be released into space to give birth to a newborn universe. The radius of a black hole singularity and superparticles is similar to the radius of atoms and subatomic particles. The singularity and superparticles are dense balls of rapidly rotating and moving objects. Superparticles have a huge mass concentrated in a tiny size, as the volume of subatomic particles, and are capable of moving at a speed higher than the speed of light to collide with a singularity and feed it. Gravitational acceleration g on the surface of a singularity ball and gravitational potential energy of the dropped superparticles with mass M and from height h of the surface of a singularity can be calculated mathematically by using eqn. (3) and eqn. (7).

Table 1: Gravitational Acceleration of a Singularity and Potential Energy of Superparticles

Singularity Mass (M)	Singularity Radius ($R_{\text{Singularity}}$)	Gravitational Acceleration on the Surface of a Singularity $g = G \frac{M}{r^2}$	Gravitational Potential energy of the distant Superparticles $GPE = mgh$
$2 \times 10^{30} \text{ kg}$	$5.3 \times 10^{-11} \text{ m}$	$4.751 \times 10^{40} \text{ m/s}^2$	$2.8506 \times 10^{44} \text{ J}$
$6 \times 10^{24} \text{ kg}$	$2 \times 10^{-15} \text{ m}$	$1.00095 \times 10^{44} \text{ m/s}^2$	$4.0038 \times 10^{43} \text{ J}$
$2 \times 10^{31} \text{ kg}$	231 pm	$2.5 \times 10^{40} \text{ m/s}^2$	$1.00043 \times 10^{47} \text{ J}$
$2 \times 10^{36} \text{ kg}$	126 pm	$8.406 \times 10^{45} \text{ m/s}^2$	$6.7248 \times 10^{56} \text{ J}$
$2 \times 10^{41} \text{ kg}$	60 pm	$3.7072 \times 10^{51} \text{ m/s}^2$	$2.9657 \times 10^{67} \text{ J}$
$2 \times 10^{53} \text{ kg}$	20 pm	$3.3365 \times 10^{64} \text{ m/s}^2$	$2.6692 \times 10^{105} \text{ J}$
$2 \times 10^{60} \text{ kg}$	1 fm	$1.3346 \times 10^{80} \text{ m/s}^2$	$1.06768 \times 10^{137} \text{ J}$

8. CONCLUSION

Black hole and its singularity are formed from ultimate death of Stars and survived superparticle, but Singularity is a dense, white, and smooth ball of a very compacted state of matter and energy that is stabilized at the deep heart of a low-mass and high-mass black holes. An event horizon is a distorted sphere of a compacted fabric of matter and energy that surrounding the singularity ball. Photon particles and Subatomic particles do not have much enough mass, energy, momentum, density, spinning speed and kinetic energy to reach the deep heart of a black hole because the event horizon of a black hole is much dense and compact fabric of matter and energy that covered the black hole singularity in three dimensions. Photon particles could be accumulated inside an event horizon region, but most of subatomic particles are annihilated entirely inside the

turbulence fabric of a black hole. Superparticles are only familiar particles are formed inside a black hole and capable of arriving the heart of a black hole. Superparticle has tiny size, lower resistance with compacted dark matter, enormous mass, density, energy, spinning speed, momentum, velocity, thermal energy, kinetic energy, electromagnetic field and great power to break the compacted fabric and gravitational wall of a black hole, and able to build a temporary tunnel during its transition in the fabric of a black hole to collide directly with an external surface of black hole singularity. Superparticle is a main food and fuel for a singularity. Mass and density of a singularity may increase rapidly when bombarded by much numbers of superparticles. The density of a singularity ball will increase warmly, and the radius of an event horizon sphere will increase automatically. Singularity has huge gravitational acceleration and

gravitational force on its surface. Superparticle has a powerful energy and huge angular momentum to fall down rapidly on the surface of a singularity, it maybe hangs here for a limited time or be collapsed there during ultimate collisions with an external surface of a singularity. Black hole singularity has powerful gravitational potential energy and attraction force to pull in particles from its surrounding, and its surface protected by intense electromagnetic field that make superparticles and photon particles to be trapped and freeze there inside the deep heart of a black hole. Black hole singularity and superparticles are acting on one another as two positive charges or negative charges that repulse one another and attract one another to save the general balance of a black hole. The survived superparticle will become a black hole singularity in the future. Both of black hole singularity and superparticles have huge mass, density, energy, angular momentum, and electromagnetic field to tide one another and accelerate each other.

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CONFLICT OF INTEREST

I declare that I have no conflict of interests.

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