

Angular Momentum and Surface Temperature of the Singularity and Superparticles

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ABSTRACT: In the present work, the rotational frequency and surface temperature of a black hole singularity and the Superparticles could be determined by using Wien's Law and utilizing the conservation law of angular momentum of the stretched and squeezed celestial objects. The size of stars, planets, rocks, human body, and celestial objects could be reduced to the radius of atoms or subatomic particles since they are dragged into the event horizon of a black hole. The black hole has a powerful tidal force, gravitational field, intensified singularity tunnel waves, compacted dark fabric matter, and interwoven electromagnetic lines, even trapping photon particles and superparticles that struggle to pass through its interior structure. The celestial objects have been compressed steeply inside the event horizon zone due to the stress of a black hole and powerful singularity tunnel waves. The distance between atoms in the structure of the compressed celestial objects could be reduced to fuse since they fall directly into the depth of a black hole. The size of the celestial object has been reduced, its density, angular momentum, rotational frequency, and external surface temperature increased. In fact, the tremendous amount of mass and energy has been collapsed at the edge of a singularity and in the bottom of a supergiant black hole to form the superparticles with the mass of a visible universe and release them into infinite space outside the parent black hole. The maximum number of superparticles with variable masses could be formed inside the supergiant black hole before the creation and evolution of our Visible Universe. Indeed, the superparticles are cosmic seeds that have been created inside the supergiant black hole to form our visible Universe and Multiverses. The stars, planets, galaxies, living creatures, and whole celestial objects in the visible universe, and multiverses in infinite existence, are only superparticles that have been created in the core of a largest type of the supergiant black holes and released into space to evaporate and to form a new universe. The superparticle with a mass of a visible universe is a cosmic seed that formed inside a supergiant black hole, was released into space before the Big Bang, and rapidly evaporated to form our visible universe.

KEYWORDS: Supergiant Black Hole; Cosmic seed; Superparticles evaporation; Surface Temperature of a Singularity; Collapsed matter and energy; Rotational Frequency.

1. INTRODUCTION

A black hole is a place where matter and energy are distorted steeply around a dense sphere of singularity, and superparticles have been formed in its heart due to the powerful singularity tunnel waves and accreting matter in the accretion disk. The density of fabric particles increased at the edge of a singularity ball, and singularity tunnel waves can penetrate through it at a higher speed and energy to release information. The collision opportunity and unification of collapsed matter and energy had been increased in the accretion disc of a black hole, and the event horizon zone to produce the maximum number of superparticles. The maximum number of the superparticles can penetrate the thickness of a black hole and reach the heart of a black hole immediately. The rotational frequency and thermal energy of a superparticle can be increased during its violent journey into the bottom of a black hole. The black hole contained in its heart a dense object called the black hole singularity [1, 2, 3, 4, 5]. The black hole could have formed from the collapsed of the core of the exploded stars in violent phenomena called

supernova event. When the fuel of the star has vanished, its heart may collapse inward to form a dense sphere of matter and energy called the singularity sphere. The black hole itself contained a singularity. The cosmic fabric of ordinary matter and dark matter had been distorted steeply around the singularity sphere to build up an event horizon from distorted fabric particles in its external edge and an accretion disc from swirling ordinary matter and energy. The hydrostatic balance of stars could be suspended since the fuel of stars has been exhausted entirely. The tussle between thermal energy and gravity has enhanced the stability of stars, typically main-sequence stars. Gravity can be a winner in the final steps of a star's lifetime, then the stellar mass and gravitational force can press on the core of the star to collapse and form a new dense object. Its collapsed core is called the black hole singularity [6, 7, 8, 9, 10]. The black hole consists of a dense ball in its heart called the singularity, violently distorted dark fabric matter, and dark fabric energy is named an event horizon zone, and an accelerated ordinary matter and ordinary energy in outer space, which is called the accretion disc. The

Matter in the event horizon and accretion disc could be distorted and oscillate rapidly due to powerful singularity tunnel waves coming out from the rapid spinning singularity sphere in the depth of a black hole. The singularity and superparticles are two perfect spherical balls of the steeply condensed state of matter and energy, which are spinning up quickly according to Newtonian mechanics, Thermodynamics, GR, and Quantum mechanics. Powerful turbulence and intense electromagnetic radiation may be displayed during the rapid transition and spinning of the superparticles inside the compacted fabric of matter and energy in the lower shells of the black hole.

The black dwarfs are formed from the dead heart of low mass stars, the massive black holes were formed from collapsed cores of high mass stars in a violent event is called the supernova event. Scientists believed that the active galactic nuclei and Quasars contained a supermassive black holes [11, 12, 13, 14, 15, 16, 17, 18, 19, 20]. The Quasars and galaxies are two essential environment to feed a black hole to grow rapidly and become a supermassive black hole. Huge amount of matter, gas, and dust particles are concentrated in the center of Quasars and galaxies, as a result the black hole can grow quickly in there. The Supermassive black hole could be formed from collapsed huge amount of matter and energy as a superparticle inside the largest supergiant black holes in the visible universe or it may be formed from the collapse heart of a star and teared enough mass from its companion stars or its singularity maybe bombarded by maximum numbers of superparticles to grow rapidly in future. The mass of a black hole maybe started as few kilograms and collected mass from its surrounding or bombarded by additional superparticles to grow step by step. The supergiant black hole, the visible universe and multiverses, souls, whole types of matter, and energy are available in the past, present, and future. The Creation processes and death are only several steps of an evolution started, converted, and disappeared inside an infinite world. The origination of the visible Universe and multiverse seed are only Superparticles were formed in past inside a supergiant black hole and escaped into space evaporated violently to form all celestial objects in the visible universe and other cosmos. We are a tiny fraction thing of the superparticle's mass and energy that had been formed in the violent world, typically inside the supergiant black hole. The supergiant black hole is the origination and common center of creation for a visible universe and whole multiverses. Indeed, the creation of a superparticle to be the cosmic seed for a newborn universe is required to a supergiant black hole to do that. The dark fabric matter and the dark fabric energy are available inside infinite space before and after the creation of a visible Universe and several multiverses. The dark fabric matter are maximum numbers of fabriton particles had been warped steeply around the singularity and superparticles of the supergiant black hole. The supergiant black hole has enough mass, density, gravity, strict electromagnetic field

and any nature force to capture, collapse, distort, and compress the fabritons particles and produce an ordinary matter and superparticles from such a collapsed fabriton particles. The fabriton particles could be vibrated and collapsed violently to form the ordinary matter and energy due to powerful singularity tunnel waves and a supergiant black hole compression force. The supergiant black hole has huge mass, density, energy, largest event horizon zone, biggest amount of matter, and hottest particles in its accretion disk. It is the common creation place and evolution of the visible universe and multiverses. The cosmic mass seeds as superparticles are still formed inside this largest type of a supergiant black hole and they are escaping into free space to form newborn Universe. Fewer and maximum numbers of superparticles could be formed, improved, and escaped into infinite world to give birth for newborn universes. The journey of a visible universe was initiated in such a way.

The main objectives of this study are to calculate the Rotational Frequency f and Surface temperature T of a spinning singularity and vibrating superparticles.

2. CONSERVATION LAW OF ANGULAR MOMENTUM

The conservation law of angular momentum states that the total angular momentum of a system remains constant if no external force or external torque is acting upon it. It is analogous to the conservation of linear momentum, which explains why a spinning object continues to rotate at a constant rate unless a twisting force is applied. In an elliptical motion of an object around the center or during the spinning of an object, its tangential velocity and angular velocity could be increased inversely with the radius according to the conservation law of angular momentum [21, 22, 23, 24, 25]. Mathematically, for a system where the initial angular momentum equals to final angular momentum ($L_i = L_f$), the moment of inertia (I) changes, since the product of initial moment of inertia and initial angular velocity ($L_i = I_i \omega_i$) equals the product of the final moment of inertia and final angular velocity ($L_f = I_f \omega_f$) which can be represented as $L = I\omega = \text{constant}$ when applied net torque (τ) is zero. The Law of Conservation of Angular Momentum could be derived from Newton's second law for rotational motion, which states that the net external torque on a system is equal to the rate of change of its angular momentum ($\tau = \frac{dL}{dt}$). Therefore, if the net external torque is zero, then $\left(\frac{dL}{dt} = 0\right)$, then $(dL = 0)$, meaning the angular momentum (L) remains constant over time, or L is conserved. The angular momentum (L) of a particle is defined as the cross product of its position vector (r) and its linear momentum (p):

$$L = r \times p \quad (1)$$

Differentiate both sides of the equation (1) with respect to time (t) to derive the conservation law of angular momentum:

$$\frac{dL}{dt} = \frac{d}{dt}(r \times p) = \frac{dr}{dt} \times p + r \times \frac{dp}{dt}$$

Substitute the relationships for velocity (v) and force (F):

$$\frac{dr}{dt} = \mathbf{v} \text{ (velocity)}, \text{ and: } \frac{dp}{dt} = \mathbf{F} \text{ (force)}.$$

($p = mv$). Where p is a linear momentum, m is the mass of particle.

$$\frac{dL}{dt} = v \times p + r \times F = v \times mv + r \times F.$$

($v \times mv = 0$), The cross product of a vector with itself ($v \times v$) is always zero: $m(v \times v) = 0$.

$$\frac{dL}{dt} = v \times mv + r \times F = 0 + r \times F = r \times F = \tau.$$

Eventually, the Law of Conservation of Angular Momentum is derived from Newton's second law for rotational motion, it is become: ($\frac{dL}{dt} = \tau$). The Law of Conservation of Angular Momentum states that if the net external torque on a system is zero ($\tau = 0$), the angular momentum is conserved. In this case: ($\frac{dL}{dt} = 0$). This means the rate of change of angular momentum is zero, so the angular momentum (L) is constant over time. ($dL = 0$, $dL = L_f - L_i$), ($L_i = L_f$). We proved that initial angular momentum equals the final angular momentum.

$$\frac{dL}{dt} = \tau \quad (2)$$

$$L_i = I_i \omega_i \quad (3)$$

$$L_f = I_f \omega_f \quad (4)$$

$$I_{\text{Solid Sphere}} = \frac{2}{5} mr^2 \quad (5)$$

$$v = r \omega \quad (6)$$

$$v = \frac{(\text{Nrevolution} \times 2\pi r)}{t} = r 2\pi f \quad (7)$$

$$\omega = 2\pi f \quad (8)$$

$$I_i \omega_i = I_f \omega_f \quad (9)$$

$$L_i = L_f \quad (10)$$

The Black hole singularity and superparticles are compact and spherical celestial objects. They are rigid bodies filled with huge matter and energy. The radius of a singularity and superparticles (r) is similar to the radius of an atom or subatomic particles. They have higher rotational speed, frequency f , angular speed ω , and angular momentum L . The Singularity and superparticles have maximum central temperature and surface temperature due to their higher density, pressure, and rapid spinning speed. In the conservation law of angular momentum, the tangential velocity, angular speed, and radius may be changed; the Angular momentum of the spinning object, and its mass remain constant. The radius, tangential velocity, and angular velocity are changeable due to the increment and decrement of the size of a spinning spherical object.

3. WIEN'S LAW

In the physics and thermodynamics, the Wien's displacement law states that the black-body radiation curve for different temperatures peaks at maximum wavelengths ($\lambda_{\text{Max}} = \lambda_{\text{Peak}}$) that are inversely proportional to the temperature T . The wavelength of an emitted radiation is measured in meters (m), and its temperature is measured in Kelvin (K). If we consider the peak of blackbody emission per unit frequency, then the peak wavelength is inversely proportional to temperature, but the peak frequency is directly proportional to temperature. Wien's law is used to determine the surface temperature of celestial objects, typically the hottest celestial objects like stars and it is necessary to explain the colour changes in heated objects [26, 27, 28, 29, 30]. The speed of a photon particle is still constant in space and on the external surface of a black hole singularity or superparticles. A photon particle could be trapped and accumulated between the external surface of a singularity and the internal surface of the event horizon zone because the black hole singularity has the greatest gravitational field and intense electromagnetic line. The region between the external surface of a singularity and the internal surface of an event horizon is called the singularity tunnel vacuum or the singularity Quantum tunnelling. The size of a singularity tunnel vacuum is similar to the size of atoms or molecules. Most of the photon particles had been trapped there and concentrated around the surface of a singularity for a long time; as a result, the singularity appears as a white and smooth ball of the condensed state of matter and trapped energy in the tiny region in the size of atoms or subatomic particles. The photon particles on the surface of a singularity have a huge frequency and energy; as a result, the surface temperature of a singularity is extremely high. The frequency of a spinning singularity or superparticle would be similar to the frequency of a vibrating particle or photon particles on their external surface. The spinning speed, angular speed, angular momentum, and tangential velocity of the photon particles or any compacted matter particle on the external surface of a singularity or superparticle are similar to those spinning speed, angular momentum, and tangential velocity of the singularity or superparticle. The photon particle may escape at the speed of light, but it has a higher frequency and energy. As a result, the surface temperature of a singularity is extremely high and luminous. The photon particle could be trapped and reflected between the external surface of a singularity and the internal surface of an event horizon due to the limited speed of light, the powerful gravitational field, and the intense electromagnetic field of the singularity sphere. The surface temperature or central temperature of the singularity sphere may exceed the Planck temperature or lower than it.

The external surface of the superparticles could be torn apart due to their rapid motion, high spinning speed, maximum surface temperature, and their powerful tension with concentrated and compacted dark matter particles in the

event horizon zone. It is a main reason to see the naked heart of a superparticle, and photon particles can escape from its external surface to release information about the violent nature of a superparticle. The photon particles are struggling to leave the external surface of a singularity. The external surface of a singularity could be detected by singularity tunnel waves or by photon particles that escaped throughout the superparticle tunnel. A temporary tunnel vacuum has built up since the superparticles collided with a singularity. The black hole singularity could be bombarded by superparticles, which would feed it, increase its mass and density, and alter its external surface temperature and angular momentum. The gravitational field of the singularity is formed due to a condensed amount of mass in a tiny size, as an atom, or due to the concentrated fabricton particles nearby or around the external surface of a singularity sphere. The event horizon is a concentrated shell of fabricton particles due to the condensed state of matter and energy inside the singularity sphere. The electromagnetic field of a singularity sphere is formed from concentrated and combined superparticles or collapsed matter, atoms, and subatomic particles in the volume of a point as the size of atom is called a singularity. The frequency of a singularity or superparticles has a similar frequency to that of the photon particles. It is necessary to find out the maximum wavelength of a photon and the surface temperature of a singularity or superparticle by using Wien's law.

$$T = \frac{0.0029 \text{ m.K}}{\lambda_{Max}} \quad (11)$$

The relationship between wavelength and temperature is inversely proportional, where the higher the temperature, the shorter or smaller the wavelength of the thermal radiation. Any temperature change inversely changes the wavelength, so the lower the temperature, the longer or larger the wavelength of the thermal radiation. For example, in the visible radiation spectrum, hot objects emit bluer light than cool objects. The hot blue stars emit shorter wavelengths of thermal radiation due to sustainable nuclear fusion in their hearts. The red giant stars radiate longer wavelengths because they are cold stars, and the nuclear fusion has been suspended in their cores a long time ago.

$$c = f \cdot \lambda_{Max} \quad (12)$$

Where c is the speed of electromagnetic radiations in space, and it is constant about ($c=300,000 \text{ km/s}$), f is the frequency of a photon particle, and λ_{Max} is the maximum wavelength of a photon particle, it is inversely proportional with a temperature according to eqn. (11). The frequency, wavelength, and temperature of an emitted radiation are changeable, but the speed of light may remain constant everywhere, even in the core of a black hole or on the surface of a singularity and superparticles. The black hole singularity and superparticles have a higher surface temperature and a

shorter wavelength. By using Wien's law, we can calculate the surface temperature of a singularity and superparticles. The speed of radiation on the surface of a singularity and superparticles has the same speed of light, but its frequency or its wavelength is changeable according to the equation. (12), it is an equation of light speed. The speed of light is constant, and it is necessary to calculate the frequency and wavelength of an excited photon particle in the core of a black hole. The spinning speed of a singularity and superparticles influences the photon particles on their surface. The photon particles on the surface of a singularity and the superparticles have the same frequency as the frequency of the rotated singularity and superparticles, but the speed of a photon particle is similar to the speed of light in space. It is easy to know the angular momentum and frequency of the spinning singularity and superparticle to find out their surface temperature, and the frequency or wavelength of a photon particle.

4. COLLAPSED MATTER AND ENERGY

The collapse of matter and energy is a violent event that refers to the extreme gravitational collapse of matter into a superdense state, such as white dwarf stars, neutron stars, superparticles, and a black hole singularity. In the singularity world, where any state of matter and energy is compressed to a point in size of an atom or subatomic particles. The matter can be converted into energy, which is described by Einstein's theory of relativity. This phenomenon occurs in Nuclear disasters and nuclear fusion processes, while, conversely, energy can be considered a condensed matter. The condensed matter is a huge number of photon particles that are concentrated on a tiny and large scale of space. A tremendous amount of matter and energy could be squeezed into a small point, similar to an atom, which is called a singularity or superparticle. Originally, the subatomic particles and the whole visible universe could be created from a concentrated and condensed number of photon particles. The photon particles are the smallest portion of energy and mass that can be compressed and condensed to produce matter or released into space, becoming electromagnetic radiation. When matter is compressed, concentrated, and accumulates with sufficient mass and gravity, its own gravitational attraction becomes so strong that it overcomes all other forces in nature, causing the matter to collapse inwards. This phenomenon is known as the collapsing matter event, which can lead to the formation of a black hole and its singularity, which is a point of an atomic volume within a superdensity, and supergravity. The concept that matter is a form of condensed energy is foundational in physics, as expressed by Einstein's famous equation of energy, which illustrates that mass and energy are interchangeable. This means the matter can be converted into energy when evaporated, or energy could be converted into matter when condensed [31, 32, 33, 34, 35, 36]. The matter cooling mechanisms, like Collisional Energy Loss, such as in electron collisions, when they lose kinetic and potential

energy, then they sink deeper into the gravitational well. In the behaviour of dense objects like black hole singularity and superparticles, where the matter is compressed to a tiny point, and no energy is lost, but rather transformed into an incredibly dense and compacted form due to supergravity and a powerful electromagnetic field. The universe contains only 5% the ordinary matter and energy of the total mass of the visible universe, this ordinary matter and energy had been surrounded by the other 95% of dark matter and dark energy. The dark matter and dark energy of the fabriton particles interact with ordinary matter and energy to form atoms, planetary systems, stellar systems, galaxies, and black holes.

Electrons and atomic nuclei are held together by the electromagnetic force, and the fabriton particles distribution in the structure of atoms contributes to creating an atom. Fabriton particles are distributed widely in the structure of the whole visible universe and contribute to forming entire celestial objects and galaxies. Gravitational collapse is the contraction of a cosmic object and molecules due to the influence of its own gravity or any neighbouring object, which tends to draw matter inward toward the center of gravity. A supernova is a cosmic phenomenon in which the stellar shell evaporates and its core collapses inward to form a neutron star or a black hole, depending on the mass of the collapsed star. A supernova event is an example of a gravitational collapse. The universe and galaxies are violent places where stars are born and collapse. The remnant core of a solar mass star may produce a white dwarf star. In a white dwarf star, the electron degenerate pressure suspended the gravitational contraction. The gravitational collapse has been suspended in the neutron stars due to neutron degenerate pressure. Einstein's famous equation of mass and energy:

$$E = mc^2 \quad (13)$$

Where **E** is the energy, **m** is the mass of an evaporated object, and **c** is the speed of light of an evaporated mass that converted into an energy form. The fraction of mass of an object can be converted into energy in nuclear reactors, the explosion of hydrogen bombs, nuclear fusion processes in the heart of stars, and collisions of particles in the accretion disc of the black holes. The mass can be converted into energy due to the matter dissipation and destruction. The powerful tidal force of a black hole may tear apart mass from the stellar atmosphere and accelerate the nuclear fusion in its core to produce the maximum amount of energy. The surface temperature of a companion star can be increased urgently due to the powerful gravitational waves of a black hole. The life cycle of stars in the black hole zone is gone briefly due to the black hole's gravitational influence. The stars can burn out their fuel rapidly and collapse urgently due to the companion black hole effect. The dark matter and dark energy are available inside infinite space and distorted around the supersingularity of a supergiant black hole, where the visible universe and multiple universes could be formed as surviving superparticles from collapsed matter and energy there. Dark matter and visible matter could be accumulated, distorted,

concentrated, and collapsed inward violently to form black hole superparticles with minimum and maximum masses. The superparticle with a lower mass may become a singularity for a stellar mass black hole. The surviving superparticle with a mass of the visible universe may become a big bang singularity and evaporate into space to form the whole visible universe due to its rapid motions in the compacted space. The fabriton particles of a dark fabric matter could be stretched, concentrated, compressed, and annihilated at the edge of a black hole singularity to form ordinary matter or compacted superparticles. The ordinary matter and energy of the visible universe could be formed from collapsed dark matter particles in a violent world near the edge of a black hole singularity. The dark matter and energy were available before and after the creation of the visible universe. A high enough number of fabriton particles could be distorted and collapsed violently inside a supergiant black hole to form ordinary matter, superparticles, and feed the black hole singularity.

5. GRAVITATIONAL ELECTROMAGNETIC FIELD OF A SINGULARITY

A singularity is a super-dense ball of the collapsed matter and energy at the atomic scale. It is possible to concentrate a tremendous amount of mass and energy in a tiny point where the gravitational field and electromagnetic force are concentrated and accumulated to capture superparticles and drag them inward with a speed higher than the speed of light. A highly concentrated fabriton particles cover the black hole singularity, even superparticles struggling to penetrate the heart of a black hole, but their speeds had been increased to higher than the speed of photon particles to reach there. The fabriton particles covered the singularity, they represent the gravitational field, and electromagnetic lines are concentrated around the edge of a singularity to make a powerful electromagnetic field. A powerful gravitational field and intense electromagnetic field are combined to protect the black hole singularity [37, 38, 39]. The universe was a surviving Superparticle that was created by a supergiant black hole due to the collapse of a high enough amount of matter and energy. The collapsed matter and energy in the core of a supergiant black hole may produce a superparticle with a mass of the visible universe. The escaped superparticle with a speed higher than the speed of light may have evaporated and formed all stars and galaxies in the observable universe. The visible universe and all living creatures are remnants of a collapsed and evaporated superparticle inside an infinite space, far away from the parent supergiant black hole. The largest type of supergiant black hole exists inside infinite space, and it is a violent place where multiple types of superparticles with a mass lower or higher than the mass of our universe are created there and escaped into infinite space to form new universes. The black hole singularity has powerful singularity tunnel waves, an electromagnetic field, and strict gravity to

accumulate matter and energy from its external edge and produce maximum numbers of the superparticles from such collapsed matter.

5.1 Gravitational Field of The Singularity

A singularity is a theoretical condition in which gravity is predicted to be so intense and violent that even the cosmic dark fabric itself would break down catastrophically in its external edge. The singularity is a great regression region where all types of matter and energy could be attracted into its center at a speed exceeding the speed of light. The superparticles are the only energetic type of particles that may collide with a singularity to feed themselves and enhance its gravitational field and electromagnetic fields. The black hole singularity has a tiny radius, huge angular momentum, and giant density, which are necessary factors to build up the tunnel in the compacted fabric of a black hole, to capture any type of matter and energy from its external edge. The gravitational field is a distortion, ripples, and a tunnel effect that appears in the cosmic fabric which surrounds any object with low mass or high mass. The gravitational force is a vector quantity, meaning it has both magnitude and direction. The strength of the gravitational field decreases gradually due to an increase in the distance between two objects and depends on the total mass of the attracted objects. The gravitational force between two objects increases since the space between them is reduced and the density of the cosmic fabric is enhanced; typically, this phenomenon is observed in compacted fabric in black holes. Every object with mass generates a gravitational field, ripples, and a tunnel according to its mass and density. The black hole singularity has a tiny point, and a huge mass has compressed into such a tiny point, distorting the cosmic fabric steeply and attracting mass from its surroundings at a speed higher than the speed of light. In fact, the singularity sphere could be surrounded by a thick and dense shell of a cosmic dark fabric. The superparticle is only a well-known ultra-massive particle in nature capable of moving and colliding with the surface of a singularity. The mass, density, and moving speed of a superparticle are high enough to break that compacted fabric and pass through the thickness of a black hole singularity and hit its heart at once.

The power of a gravitational field or gravitational force of the black hole singularity depends on the number of fabric particles that were accumulated, compressed, and

condensed around it, or relies on the ratio of mass that was collected, combined, and condensed in the structure of a singularity sphere. The singularity has a strict gravitational force and a huge attractive force effect that is observed in a region located at the edge of a singularity sphere. Superparticles have the mass of rocks and stars, and can hit the singularity immediately. The Cosmic dark fabric is distorted around the massive object, and other objects at their edges may drop inwardly into the center of that massive object, which is called a gravitational field. The singularity could be protected extremely well by the gravitational field and the powerful electromagnetic force. The dark fabric matter and energy have been warped steeply around the singularity sphere as a dense and thick wall and strict barrier. Maximum numbers of photon particles and superparticles could be trapped and accumulated at the edge of a singularity. The mass and density of the singularity had been increased violently by bombardment of superparticles, and then the density and thickness of the dark fabric matter will be enhanced due to singularity stress. The free space between the external surface of a singularity and the internal surface of an event horizon is the fantastic tunnel where photon particles have been accumulated, and superparticles are dragged there to collide with the heart of a singularity or pass through it into outer space forever. This tunnel is a bizarre place where the electromagnetic field and gravity combine to capture the maximum number of photon particles and superparticles. The speed and energy of superparticles had decreased since entering this quantum tunnel. The electromagnetic force at the edge of a singularity sphere appears as the strong nuclear force that is available in the atomic nuclei. The strong nuclear force is necessary to hold protons and neutrons inside an atomic nucleus and build up a strict atomic structure. The strong electromagnetic force and gravity combine to enhance the attraction and repulsion forces among superparticles and enhance the singularity structure. Indeed, the Superparticles have powerful degeneracy pressure and concentrated electromagnetic lines to build up the powerful binding energy and bizarre crystalline shape. The maximum number of superparticles and photon particles had been trapped around the singularity to make a spherical shape for the rotated black hole singularity. The singularity is a perfect ball of the steeply warped, bizarre, and concentrated state of matter and energy.

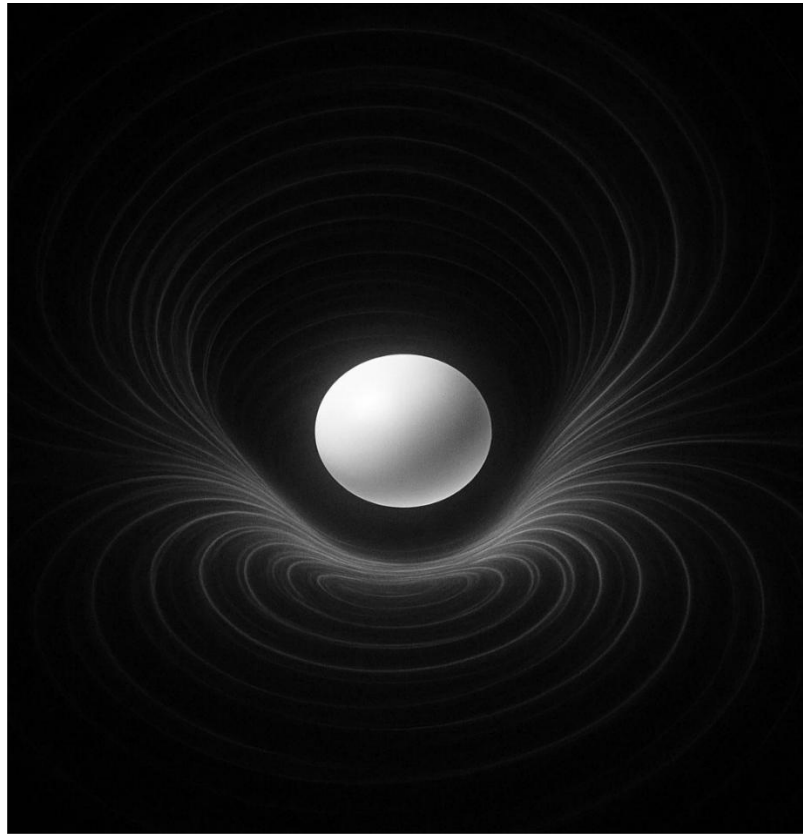


Fig. 1. Gravitational Field of a Black Hole Singularity.

5.2 ELECTROMAGNETIC FIELD OF A SINGULARITY SPHERE

An electromagnetic field (EMF) is a combination of an electric field and a magnetic field, generated by electric charges and currents. An electric field can be produced by stationary electric charges according to electrostatics, and a Magnetic field is produced by moving electric charges and electric currents in electromagnetism induction. When electric and magnetic fields interact, they create an electromagnetic field. Electromagnetic fields interact with matter, with high-frequency EMFs (ionizing radiation) capable of damaging cells, DNA, and burning living tissue, and low-frequency EMFs (non-ionizing radiation) interacting differently, maybe used for medical treatment. Non-ionizing radiation, such as electromagnetic radiation that is produced from Power lines and household appliances, Microwaves, cell phones, and Wi-Fi. Ionizing radiation: high-frequency EMFs contain enough energy to displace electrons and cause damage to the environment, examples include: Sunlight, X-rays, and Gamma rays. The Sources of EMFs could be Natural sources, such as the Earth's own magnetic field and electric fields from atmospheric charges during thunderstorms, and Human-made sources, including Medical equipment, Wireless devices, and telecommunications equipment. The way in which charges and currents interact with the electromagnetic field is described precisely by Maxwell's equations, the Lorentz force law, and due to experimental evidence. The Lorentz theory applies to free charges in electromagnetic fields, but it fails to predict the

energy spectrum for bound charges in atoms and molecules. For that problem, quantum mechanics played a crucial role, ultimately leading to the development of the theory of quantum electrodynamics. Neutron stars possess extremely powerful magnetic fields, roughly a trillion times stronger than Earth's magnetic field. The strong magnetic field is formed from the rapid compression of a stellar core during a supernova event. A neutron star's magnetic field has both poloidal (dipole-like) and toroidal (ring-like) components, which are intertwined, woven, and held together strongly by the dense and conductive matter of the star. Pulsars create beams of radio radiation that are emitted along the magnetic axis, not the spin axis. Magnetars have a strong magnetic field that can distort atoms into longer, and thinner strands, and generate immense bursts of X-rays. Neutron degeneracy pressure is a quantum mechanical force that appears in neutron stars and is formed from the Pauli Exclusion Principle. It prevents neutrons from occupying the same quantum state and thus resists gravitational collapse due to the self-mass of stars. White dwarf degeneracy pressure is a quantum mechanical phenomenon, since electrons are forced into high-energy states due to compressing a solar mass star into a tiny volume, as the size of Earth or the Moon, where the space between electron particles is reduced critically.

The electron degenerate pressure acts as pressure against self-gravitation, preventing further compression and reducing the volume of a white dwarf due to gravitational effect, and keeps a star from further collapsing inwardly for a star when its fuel runs out. If the mass of a white dwarf star

exceeded the Chandrasekhar limit (1.4 solar masses), then the degeneracy pressure cannot counteract gravity, and the star continues to collapse and squeeze to form a neutron star or a black hole singularity. White dwarf stars have powerful Magnetic fields that vary significantly, ranging from a few thousand Gauss up to about billions of Gausses. Singularity degeneracy pressure is a pressure that appears in the structure of a black hole singularity since superparticles withstand the powerful gravitational force of a singularity and prevent further contraction, where gravity overwhelms all opposing forces, including thermal pressure in main-sequence stars, electron degeneracy pressure in white dwarf stars, and neutron degenerate pressure in neutron stars. The radius of a white dwarf star, neutron star, and black hole singularity is reduced; as a result, their density, gravity, and electromagnetic field are extremely enhanced. The black hole singularity has a powerful electromagnetic field, which is overwhelming the electromagnetic fields of any stars, planets, white dwarf stars, and neutron stars. The singularity can tear apart mass and energy from the external surface of the

superparticles when they pass near its edge. The gravitational field and electromagnetic field of a black hole singularity together can capture superparticles and distort the dark fabric matter at its edge. Superparticles have the mass of rocks and stars, and the size of atoms or particles, but their velocity exceeds the speed of light. The gravitational electromagnetic field of a black hole singularity can withstand any force of nature and is capable of collecting mass and energy or capturing superparticles from its surroundings to grow with the speed of lightning. The gravitational force of a singularity appears due to its tremendous mass, density, and violent distortion of the cosmic fabric around the singularity ball. The powerful electromagnetic field of a black hole singularity is formed from rapid singularity rotation, matter evaporation at its external edge, bombardment of its surface by superparticles, and accumulation of additional mass between the singularity surface and the internal edge of an event horizon, and annihilation of the fraction of mass of the excited fabriton particles at the edge of a singularity.

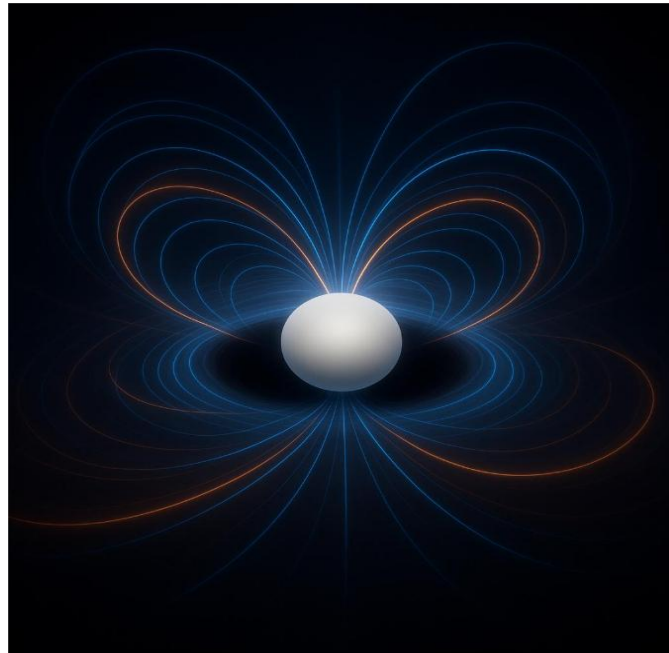


Fig. 2. An Electromagnetic Field of a Singularity Sphere

6. SUPERPARTICLES EVAPORATION

A superparticle is a superdense ball of condensed state of matter and energy. The mass of a superparticle is not constant, but similar to the mass of rocks, mountains, the Moon, planets, stellar systems, galaxies, and the Visible universe, but its size same as the size of atoms or subatomic particles. The mass of the superparticle increased rapidly due to collecting enough mass from its surroundings. The mass of a superparticle could be decreased during its super transition through the compacted fabric of a black hole. Superparticle could be evaporated since traveling urgently to hit the singularity ball at the bottom of a black hole. The maximum mass of a superparticle has evaporated during the collision event with a singularity. The fraction of mass from a

superparticle has been lost at the edge of a singularity due to the singularity tunnel waves effect. In fact, nothing in the universe is forever; even the superparticle could be evaporated partially or entirely. The condensed matter on the surface of a superparticle could be vibrated violently, excited, evaporated, and heated up, or converted into light. The surface temperature of a superparticle exceeds millions or trillions of kelvins. The fraction or a partial amount of mass could be evaporated from the external surface of a superparticle. The superparticle is a particular type of particle that has formed in a violent environment at the bottom of a black hole sphere. It has the capacity to survive in this dangerous world due to its huge mass, density, and energy that is concentrated in a tiny size. Furthermore, the fabriton

particles are dark matter particles, which could survive on the edge of a singularity ball due to their tiny mass and radius, and their huge density. The superparticles, fabriton particles, photon particles, accumulated matter in the accretion disc, and the stabilized singularity at the bottom of a black hole participate in the formation and evolution of a black hole.

The superparticle consists of a condensed core and a steeply warped matter in its surface. The matter on the surface of a superparticle would be stretched and warped as a halo or ring around the compacted core of a superparticle during its rapid transition at the bottom of a black hole. The naked concentrated heart of a superparticle could be detected due to its rapid motion inside the violent environment of a black hole. The external surface of a superparticle could be warped and compressed steeply around its dense core. The universe was a surviving Superparticle that was created violently due to singularity tunnel waves of a supergiant black hole from a high enough amount of collapsing matter and energy inside the event horizon zone. The universe was a surviving superparticle created by a supergiant black hole from a high enough amount of collapsing matter and energy. It is possible for a black hole singularity to be bombarded by four or several superparticles at once, this phenomena is called a superparticle rain. The superparticles may evaporate rapidly during direct collisions with a singularity ball. The surface of a superparticle could be evaporated during its violent collision with a black hole singularity, and its dense core may reach the heart of the singularity and stay there forever. The remnant core of a superparticle is tiny and has the greatest density. Most of the mass of a superparticle is compacted in

its core. The maximum number of superparticles had been attracted and dragged into the bottom of a singularity sphere. Superparticles in the core of a singularity enhanced its stability and gave the singularity additional mass and temperature. In fact, Neutron degeneracy pressure enhanced the stability of neutron stars, and electron degeneracy pressure increased the stability of white dwarfs. Superparticles in the core of a black hole singularity increased its stability and degeneracy pressure. Superparticles degeneracy pressure is the dynamical phenomenon that appears in a violent environment, typically in the core of a singularity and at the bottom of a black hole itself. Superparticles' degeneracy pressure developed the mass, pressure, and density of the singularity sphere and keeps its radius from any further contraction. The superparticles can withstand the huge pressure and the powerful tidal force of a black hole singularity or any powerful objects in nature. Superparticles can survive for a longer time in any location and can be evaporated during violent collisions with a singularity. The superparticles are massive and ultra-dense particles formed due to the powerful tidal force of a singularity, and they are capable of colliding with the heart of a singularity to stick there forever and feed it. Superparticle would be formed in the heart of a black hole due to maximum pressure, density, and the powerful gravitational field of a singularity, and the internal shell of the event horizon region. It is evaporated and glows with intense radiation due to the tidal effect of the singularity and turbulent waves of the internal shell of a black hole sphere.

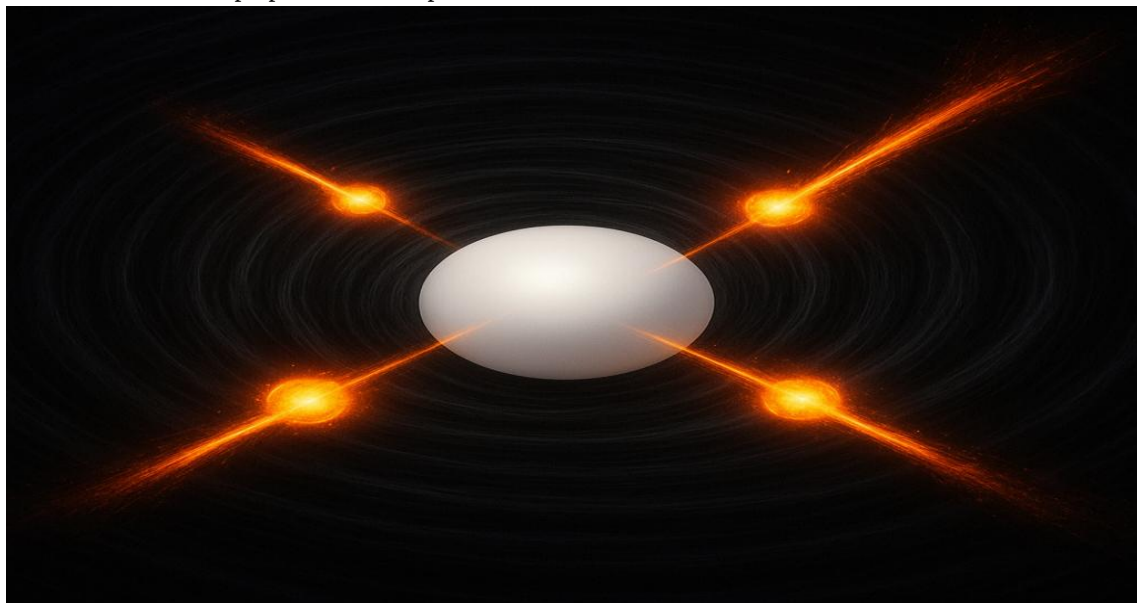


Fig. 3. Superparticles Evaporation at The Edge of a Singularity

Dark matter and dark energy are present throughout infinite space and distorted around the supersingularity of a supergiant black hole, where the visible universe and multiple universes could have formed from surviving superparticles, which are collapsed matter and energy. A fraction of mass

and energy could be evaporated from the external surface of a cosmic mass superparticle during its rapid transition throughout the event horizon of a supergiant black hole, long since our visible universe formed. The cosmic mass superparticle lost some of its mass, energy, and speed, its size

expanded, its density decreased, and it converted to a big bang singularity in a fraction of time. There are two steps before a big bang event: collapsing matter and energy into a superparticle with the mass of the universe in the size of a subatomic particle, and an escaped superparticle is the second step to form a cosmic mass singularity from a surviving superparticle. The matter in the accretion disc of a supergiant black hole dragged and collapsed inward under the tremendous pressure of the black hole, due to the singularity's rapid rotation, and its powerful tunnel waves to produce a cosmic mass superparticle or cosmic mass singularity. The Visible universe is only a superparticle that escaped from a possible collision with a supergiant singularity at the bottom of a supergiant black hole. The escaped and survived cosmic mass superparticle converted into a cosmic mass singularity before a big bang event and universe expansion. We are a cosmic mass superparticle that formed from collapsed matter and energy at the edge of a supergiant black hole. The collapsed high enough amount of mass and energy in such a violent world immediately squeezed and converted into a superparticle to escape and form our whole visible universe during its moment of successful transition. The surviving superparticle passed successfully on the edge of a supersingularity of a black hole, and left behind it a supergiant black hole to be much freer in an infinite space. The stress, pressure, stretching, squeezing, and vibration, or any other condition of a supergiant black hole, were vanished

on the superparticle in the vast distant. But the superparticle has expanded, evaporated, collapsed, annihilated, and converted into a big bang singularity, cosmic seed, and evaporated to form whole galaxies, stars, planets, atoms, subatomic particles, all living creatures, and photon particles. The tiny particle with the mass of a galaxy could be removed rapidly from the external surface of a cosmic mass superparticle in the past to make a galaxy in the present. The visible universe is still filled with low-mass and high-mass black holes, and superparticles with different masses, sizes, and densities could be formed and escape into space. The surviving superparticle event and collapsing matter and energy at the edge of a black hole singularity are sustainable forever. It is a cosmic phenomenon that happened on a cosmic scale and galaxy scale. It is a cosmic dance or a cosmic natural phenomenon occurred forever due to the violent and complex nature of the visible universe. The surface temperature of a black hole singularity and superparticles has increased and decreased extremely. We are an evaporated cosmic mass superparticle that expanded, annihilated violently, reformed, and developed to form our fantastic visible universe. The stars, planets, stellar systems, galaxies, black holes, atoms, photon particles, and fabriton particles are only formed after a superparticle with a mass similar to the mass of a visible universe has escaped, evaporated, and expanded into space.



Fig. 4. Superparticle Evaporation Outside The Supergiant Black Hole

7. SURFACE TEMPERATURE OF A SINGULARITY AND THE SUPERPARTICLES

Surface temperature is the temperature that appears at the surface of objects. The stars and compacted objects

have the hottest surface temperature. The singularity and superparticles are final states of collapsed matter and energy to a point as an atom or subatomic particle. The dark matter and dark energy had been warped steeply around the

singularity or superparticle; as a result, their surface temperature increased to trillions of kelvins immediately. The singularity and superparticle have the biggest surface temperature. The hottest objects have excited particles in their outermost layers. The surface temperature of blue stars, neutron stars, and the singularity is incredibly high. The surface temperature of the stars exceeded thousands or millions of degrees Celsius, but the surface temperature of a singularity or superparticles maybe exceeded trillions of kelvins. Both superparticles and a singularity have huge surface temperatures and central temperatures. The mass of a singularity sphere is squeezed and combined into a point same as the radius of the atoms. As a result, singularity has a huge density, powerful gravitational field, an intense electromagnetic field, and a higher surface temperature. The surface area of a singularity sphere and a superparticle is limited, and thermal energy or vibration of photon particles is incredibly high. The speed of a photon particle is similarly the speed of light on the surface of stars, planets, black holes, a singularity or superparticle according to Quantum mechanics and electromagnetic theory, but photon frequency and its energy increase, and its wavelength decreases steeply. The frequency of an oscillating particle or photon particle could be determined easily, because its frequency equals to the frequency of a spinning singularity or vibrated superparticles. The speed of an oscillating photon particle is similar to the speed of light, and its frequency equals to the frequency of a vibrated superparticle or rotated singularity ball; it is necessary to calculate the wavelength of an oscillating photon particle and the surface temperature of a superparticle or singularity by using Wien's law. The photon particle has a similar frequency to the frequency of a rotated singularity or superparticle, and its speed is exactly the speed of light in space. These two factors helped us to determine the surface temperature of a singularity ball or superparticle.

The singularity and superparticle are highly rotated objects, and contain huge angular momentum and spinning energy. The particles on their external surface in the greatest oscillations and concentration states of energy. The photon particles experience a minimum wavelength reduction and high vibration at the event horizon of a black hole or on the external surface of a singularity. Then, the surface temperature of a singularity increased violently to trillions of kelvins. But the speed of photon particles is constant in electromagnetic spectrum. The photon particle is a filament of energy that stretches and contracts due to its environment. The photon particle could be squeezed on the surface of the hottest objects or stretched in the coldest objects. Gamma rays and X-rays have a huge frequency and shorter wavelengths. The visible light and radio waves have the largest wavelengths and the lowest possible frequencies. The Superparticle with a mass of the visible universe has escaped from a supergiant black hole before the Big Bang event. This type of superparticle was formed at the bottom of a supergiant black hole and gained enough mass, energy, speed, and

acceleration to leave the supergiant black hole forever. The superparticle is intertwined with a compacted fabric of a supergiant black hole during its moment of leaving, and its external surface temperature has increased to trillions of kelvins. The excited particles in the external surface of an escaped superparticle have enough mass and energy to be released into space and form whole galaxies and stars. We are formed from the remnant ratio of matter and energy of an evaporated cosmic mass superparticle. The superparticle that has the mass of a visible Universe has survived to leave a supergiant black hole forever to form the whole visible universe after its evaporation. The multiverses have formed in such a way that our visible universe is formed within the supergiant black hole. The multiverses are the superparticles that have formed at the bottom of a supergiant black hole and had been released into space to form other universes with a mass lower or higher than the mass of our universe. The temperature of the particles at the edge of an escaped superparticle has increased to trillions of kelvins and allowing particles to be free into space and form recent galaxies and stars. The mass in the outer edge of a superparticle has evaporated into space due to its rapid vibration and thermal energy effect. The superparticle can be formed in the violent world in the depths of a supergiant black hole and evaporate gradually into outer space at a distant point from the center of a parent black hole.

8. UNIVERSE ORIGIN

The mystery and illusion of a universe formation has astonished entire scientists for decades. The origin of the visible universe still the longest debate among philosophers, religious leaders, astronomers, ordinary people, politicians, and scientists. Scientists believe the origin of the universe began approximately 13.8 billion years ago from a hot and dense state of matter and energy in an event known as the Big Bang [40, 41, 42, 43, 44]. Then, the rapid expansion, explosion, inflation, and evaporation steps of the visible Universe has created all matter, energy, space, and time, and the universe has been expanding and cooling for an ever-present time. After billions of years, the gravity caused the atoms, gas, molecules, and dust particles to form galaxies, stars, and planets. The origin of the universe remains one of the biggest illusions, mysteries and debates in the history of modern and classical science. In fact, the universe is only a superparticle that was created in the past from the collapsed matter and energy inside a supergiant black hole and escaped into outer space, forming entire stars, photon particles, particles, atoms, and galaxies after its evaporation. A supergiant black hole is the largest and powerful type of black hole that exists before the formation and expansion of a visible universe. The mass of a supergiant black hole exceeded the mass of the visible universe and the mass of several multiverses. The multiverses are superparticles that have formed inside this supergiant black hole, both before and beyond the Big Bang event. The visible universe is a

superparticle that has formed inside a supergiant black hole and been released into outer space after its expansion and evaporation. Superparticles with a mass of the visible universe, lower or higher than its mass, would be formed inside a supergiant black hole before and after a Big Bang event. The superparticles with variable masses still formed and evaporated into space to form the next universes for the future. The supergiant black hole and an infinity has the largest mass to support an evolution of the superparticles and has the largest size to cover the multiverses. The infinity has infinite mass and energy to feed the supergiant black hole, and it withstands it to produce several superparticles as the cosmic seeds for an open time. The superparticles with a mass of the visible universe or different from its mass could be formed inside the supergiant black hole and evaporated into infinite space before the Big Bang event, and after it.

Superparticles with the mass of the Visible universe and as the mass as stars would be formed inside a black hole and be capable of escaping into space immediately. The superparticle has formed from collapsed matter and energy inside the black hole, its formation initiated as the nuclear fusion ball and compressed steeply to form a superparticle at the edge of a singularity. The superparticle has high density, thermal energy, and maximum angular momentum during its formation and evolution. It has the capacity to penetrate the bottom of a black hole and escape into outer space at once. Most of the superparticles can collide with the singularity and feed it to grow and glow steeply. Cosmic dark fabric matter and energy could be warped and oscillate violently around the singularity. The photon particles are struggling to come out from the external surface of a singularity due to its intense electromagnetic field and gravity. The thermal energy and density of the superparticles and the singularity have been increased violently during multiple collisions, friction, and the accumulation of photon particles in their external edge. The speed of superparticles exceeded the speed of light during direct collisions with the singularity, and their surface temperature changed to trillions of kelvins. The superparticles can penetrate through the compacted fabric of a black hole and face a huge friction force with the distorted matter and energy at the depths of a black hole. The strengthened friction and rapid rotation of the superparticles and the singularity have increased their surface temperature incredibly, specifically during the collision event and the transition moment. Indeed, the surface temperature of the superparticle increased violently during its travel through an event horizon of a black hole, which led to the evaporation of most of its mass outside the black hole. The cosmic mass superparticle escaped at the biggest speed through the event horizon of a supergiant black hole, and evaporated into outer space immediately to form all stars and galaxies in the visible Universe [45]. The cosmic journey of the visible universe and multiverses has initiated from escaped superparticles in the past and future. The living creatures, cosmic objects, and multiverses are only superparticles that have been formed

inside the supergiant black hole and evaporated into free space. We are remnants of the superparticle evaporation and cosmic evolution. The fate of humans and all living creatures is related to the fate of the universe. Superparticles may come out from the heart of a black hole and escape in an accretion disc of a black hole, left beyond powerful black hole plasma jets [46]. Superparticles are involved in the distortion and heating of the accretion disc of a black hole.

9. RESULTS AND DISCUSSION

The mass, radius, size, density, tangential velocity, angular momentum, spinning speed, surface temperature, number of revolutions, and frequency of a black hole singularity and the superparticles could be determined. The superparticle has huge oscillation, frequency, and thermal energy due to its rapid transition, rotation, and evaporation. The Black hole singularity and superparticles could be formed during the ultimate death of a collapsed star and a steeply squeezed nuclear fusion ball in the event horizon of a black hole. Superparticle is travelling violently against the singularity tunnel waves to break the gravitational barrier and electromagnetic field of a black hole singularity. The size of a superparticle has been reduced, and its surface temperature increases to trillions of kelvins due to its motion and rotation into the heart of a black hole to collide with a singularity and feed it with additional mass and energy. The superparticle with the mass of a human body ($m = 80 \text{ kg}$), its radius is similar to the radius of a fabriton particle ($r = 1 \times 10^{-21} \text{ m}$), and its tangential velocity higher than the speed of light millions or billions of times ($v = 3 \times 10^{18} \text{ m/s}$). Then its density high as the density of a compacted singularity ball ($\rho = 1.91 \times 10^{64} \text{ kg/m}^3$). It has maximum angular speed ($\omega = 3 \times 10^{39} \text{ rad/s}$), its moment of inertia ($I = 3.2 \times 10^{-41} \text{ kg.m}^2$), and it is gained an angular momentum ($L = 0.096 \text{ kg.m}^2/\text{s}$) and higher energy to swim against the singularity tunnel waves and its ripples in the fabric of cosmos. Its rotational frequency should be ($f = 4.77 \times 10^{38} \text{ Hz}$), the frequency of a photon particle in the surface of a superparticle is similar to the frequency of a superparticle, but the speed of a photon particle is still constant same as the speed of light in space ($c = 300,000 \frac{\text{km}}{\text{s}}$), and its wavelength ($\lambda = 6.289 \times 10^{-31} \text{ m/s}$) according to eqn.(12), its surface temperature ($T = 4.61 \times 10^{27} \text{ Kelvins}$) by using Wein's law is eqn.(11). This superparticle has huge frequency, surface temperature, powerful rotational energy, and kinetic energy to penetrate through compacted wall of a black hole and collide with a singularity violently. The surviving superparticle may become a singularity for a newborn black hole. The superparticle could collide with a black hole singularity and annihilate there forever or escape into space to give birth to a newborn singularity. A fraction of mass on the surface of a superparticle evaporated and dissipated as radiation due to its rapid transition, and most of its mass was squeezed inward to increase its core density and its angular

velocity. The radius of a superparticle has been reduced, and its frequency and external surface temperature have been enhanced violently to release energetic particles and the maximum number of photon particles into space. The superparticle can grow by collecting mass from its surroundings and evaporates during its rapid transition in the deep of a Universe. The surface temperature of a superparticle changed and increases gradually to billions or trillions of Celsius due to its motion throughout the compacted fabric of a black hole.

The Earth is a rigid sphere, its mass is ($m = 5.97 \times 10^{24} \text{ kg}$), its initial radius ($r_i = 6378000 \text{ meter}$), the initial angular velocity of an earth's planet due to its every rotation per day for 24 hours is ($w_i = \frac{2\pi}{\text{time}} = \frac{2 \times 3.14}{24 \times 3600 \text{ s}} = 7.27 \times 10^{-5} \frac{\text{rad}}{\text{s}}$). If the Earth has been dragged into an event horizon zone of a supermassive black hole, and compressed violently under black hole pressure and singularity tunnel waves effect, its radius could be reduced to ($r_f = 2 \times 10^{-13} \text{ m}$) to form new compacted object which is called a superparticle or singularity ball. The initial angular momentum of the Earth's Planet is ($L_i = I_i w_i = \frac{2}{5} m r_i^2 \times w_i = 7.062 \times 10^{33} \text{ kg} \cdot \frac{\text{m}^2}{\text{s}}$). According to the conservation law of an angular momentum ($L_i = L_f$). The angular velocity of a black hole singularity with a mass of Earth is the final angular velocity of Earth after it falls into a black hole. It is about ($w_f = 7.393 \times 10^{34} \frac{\text{rad}}{\text{s}}$). Its rotational frequency could be ($f = 1.177 \times 10^{34} \text{ Hz}$), it is similar to the photon oscillation in the surface of a singularity or superparticle, then the wavelength of a photon particle becomes ($\lambda = 2.548 \times 10^{-26} \text{ m}$), and the surface temperature of a singularity ball or a vibrating superparticle with a mass of earth is extremely high about ($T = 1.138 \times 10^{23} \text{ K}$). The superparticles with the minimum radius and the largest frequency have the highest surface temperature.

The solar mass star ($m = 2 \times 10^{30} \text{ kg}$), its radius ($r = 7 \times 10^8 \text{ m}$), its rotational period for any spinning ($t = 25 \text{ days} = 25 \times 60 \times 60 = 90000 \text{ s}$), its initial angular momentum ($L_i = I_i w_i = \frac{2}{5} m r_i^2 \times \frac{2\pi}{t} = 2.735 \times 10^{43} \text{ kg} \cdot \frac{\text{m}^2}{\text{s}}$). If an object with a mass of a sun falls directly into an event horizon of a supermassive black hole, it maybe evaporated or compressed and contracted violently to the size of a black hole singularity, its radius remains as the radius of a hydrogen atom ($5.3 \times 10^{-11} \text{ m}$) according to conservation law of the angular momentum, singularity density condition and superparticles degeneracy pressure. The angular velocity of a solar mass singularity with a mass of a Sun is the final angular momentum of this compacted star is ($w_f = 1.217 \times 10^{34} \frac{\text{rad}}{\text{s}}$) when final angular momentum of a Sun's mass singularity has been equalized with an initial angular momentum of a Solar mass Star ($L_i = L_f = I_f w_f$),

then ($\frac{2}{5} m r^2 \times w_f = 2.735 \times 10^{43} \text{ kg} \cdot \frac{\text{m}^2}{\text{s}}$). The solar mass singularity has a huge tangential velocity ($v = 6.4501 \times 10^{23} \text{ m/s}$) during its rapid rotation. The frequency of a black hole singularity could be ($f = 1.938 \times 10^{33} \text{ Hz}$), the photon particle in its surface has the speed of light, its frequency as a singularity frequency and its wavelength is ($\lambda = 1.548 \times 10^{-25} \text{ m}$), and the singularity surface temperature remains very high ($T = 1.873 \times 10^{22} \text{ K}$). The moment of inertia of a singularity ball about ($I = \frac{2}{5} m r^2 = 2247200000 \text{ kg} \cdot \text{m}^2$) and its rotational kinetic energy extremely high ($KE_R = 1.664 \times 10^{77} \text{ J}$). The white dwarf is a remnant core of a dead solar mass star. It may have evaporated at the edge of a supermassive black hole or can be dragged into the bottom of a black hole to give birth to a newborn superparticle or a singularity ball.

Betelgeuse is a red supergiant star in the final steps of its lifetime due to its total fuel has been consumed in its death throes. Its mass ($m = 4 \times 10^{31} \text{ kg}$), its radius ($r = 6.17 \times 10^{11} \text{ m}$), and its rotational period ($t = 8 \text{ years} = 252288000 \text{ s}$). Suppose Betelgeuse star falls into the event horizon of a supergiant black hole during a cosmic event. In that case, it is faced with violent compression and steep radius contraction to become a superparticle or singularity at the bottom of a supergiant black hole. Its radius remains as the radius of a Calcium atom ($r_f = 1.97 \times 10^{-10} \text{ m}$). The angular velocity of a stellar mass singularity with a mass of a Betelgeuse is ($w_f = 2.44 \times 10^{35} \frac{\text{rad}}{\text{s}}$) due to conservation law of angular momentum ($L_i = L_f = I_f w_f$), it has greatest tangential velocity ($v = r w_f = 4.8068 \times 10^{25} \text{ m/s}$), and its moment of inertia about ($I = \frac{2}{5} m r^2 = 620944000000 \text{ kg} \cdot \text{m}^2$). The rotational frequency of a black hole singularity could be ($f = 3.885 \times 10^{34} \text{ Hz}$), then the photon particle in the surface of a singularity has oscillated as a singularity rotational frequency, and it is travelling as the light speed in the edge of a singularity ball. Eventually, the wavelength of a photon particle is very small ($\lambda = 7.722 \times 10^{-27} \text{ m}$), and the singularity surface temperature extremely high ($T = 3.755 \times 10^{23} \text{ K}$).

The mass of a supergiant star ($m = 3.59 \times 10^{31} \text{ kg}$), it has a huge radius ($r_i = 5.5 \times 10^{10} \text{ m}$), its rotational period ($t = 44928000 \text{ s}$). Its initial angular momentum due to spinning in its axis is ($L_i = 6.07 \times 10^{45} \text{ kg} \cdot \frac{\text{m}^2}{\text{s}}$). The remnant core of this star may be collapsed inward under gravity to form a black hole singularity after its fuel of fusion vanished, and its radius remains as the radius of an Iron atom ($r_f = 1.26 \times 10^{-10} \text{ m}$) due to superparticles degeneracy pressure. The final angular velocity of this collapsed star is ($w_f = 2.66 \times 10^{34} \frac{\text{rad}}{\text{s}}$) according to conservation law of

angular momentum $\left(6.07 \times 10^{45} \text{ kg} \cdot \frac{\text{m}^2}{\text{s}} = \frac{2}{5} m r^2 \times \omega_f\right)$. This star has a huge tangential velocity ($v = r \omega_f = 3.3516 \times 10^{24} \text{ m/s}$), and its angular frequency is extremely great ($f = \frac{\omega_f}{2\pi} = 4.235 \times 10^{33} \text{ Hz}$). Then its moment of inertia is ($I = \frac{2}{5} m r^2 = 227979360000 \text{ kg} \cdot \text{m}^2$), and its rotational kinetic energy ($KE_R = 8.065 \times 10^{79} \text{ J}$). Furthermore, the frequency of a photon particle in the edge of a singularity similar to the rotational frequency of a spinning singularity, its velocity equalized with a speed of light, and the surface temperature of a singularity enhanced is ($T = 4.1 \times 10^{22} \text{ K}$).

A black hole singularity with mass of 10 billion Suns ($m = 2 \times 10^{40} \text{ kg}$), its radius same as the radius of a Helium atom ($3.1 \times 10^{-11} \text{ m}$), and its density very high. Its tangential velocity has been determined as ($v = \sqrt{\frac{Gm}{r}} = 2.074 \times 10^{20} \text{ m/s}$), its initial angular velocity is ($\omega_i = \frac{v}{r} = 6.69 \times 10^{30} \frac{\text{rad}}{\text{s}}$), and its frequency ($f = 1.065 \times 10^{30} \text{ Hz}$). It has huge moment of inertia about ($I = \frac{2}{5} m r^2 = 7.688 \times 10^{18} \text{ kg} \cdot \text{m}^2$), rotational kinetic energy ($KE_R = 1.72 \times 10^{80} \text{ J}$), and its initial angular momentum is ($L_i = I_i \omega_i = \frac{2}{5} m r^2 \times \frac{2\pi}{t} = 5.14 \times 10^{49} \text{ kg} \cdot \frac{\text{m}^2}{\text{s}}$). The radius of a black hole singularity has been increased slightly during bombarding its surface by superparticles and an increment of its temperature and thermal energy. The radius of a singularity may not become zero anyway, even by gravity, because the superparticles degeneracy pressure, and the thermal energy of a singularity suspended its furthered collapsing and anymore diameter contraction. The gravitational pressure causes the singularity to shrink inwardly, but radiation pressure and superparticles degeneracy pressure are worked against the singularity contraction. The radius of this singularity could be increased slightly by thermal energy, and radiation pressure effect to reach the radius of an Iron atom ($r_f = 1.26 \times 10^{-10} \text{ m}$), then its final angular momentum may becomes ($\omega_f = 4.047 \times 10^{29} \frac{\text{rad}}{\text{s}}$), according to the conservation law of an angular momentum ($L_i = L_f = I_f \omega_f$), ($5.14 \times 10^{49} \text{ kg} \cdot \frac{\text{m}^2}{\text{s}} = \frac{2}{5} m r^2 \times \omega_f$). It has huge spinning frequency ($f = \frac{\omega_f}{2\pi} = 6.44 \times 10^{28} \text{ Hz}$), and maximum surface temperature is ($T = 6.229 \times 10^{17} \text{ K}$), since the rotational frequency of a singularity equalized with the frequency of the photon particles in its external surface.

The Supergiant black hole is the largest type of black holes in the universe. Its radius or its event horizon exceeded 20 light years or billions of light years according to its mass, Schwarzschild radius and escape velocity of light in the edge of a black hole. Its mass could be trillions of times the mass of galaxies. The singularity that resident in the core of a

supergiant black hole has a mass that may be thousands or millions of times the mass of an andromeda galaxy ($m = 2 \times 10^{45} \text{ kg}$). Its radius maybe same as the radius of a Lithium atom ($r = 1.52 \times 10^{-10} \text{ m}$), and its density should be ($\rho = 1.36 \times 10^{74} \text{ kg/m}^3$). The radius of a black hole singularity similar to the radius of atoms or subatomic particles, and may not become zero under any gravity condition or mass effect due to the conservation law of angular momentum, radiation pressure, and superparticles degeneracy pressure. The singularity that has a huge mass could be resident in the deep of a supergiant black hole, it has a huge tangential velocity equal to the speed of particles on its surface ($v = \sqrt{\frac{Gm}{r}} = 2.963 \times 10^{22} \text{ m/s}$). Thus, its angular velocity is ($\omega = \frac{v}{r} = 1.949 \times 10^{32} \frac{\text{rad}}{\text{s}}$), its frequency is ($f = 3.104 \times 10^{31} \text{ Hz}$) and its surface temperature incredibly about ($T = 3 \times 10^{20} \text{ K}$). The singularity tunnel waves may increase the density, oscillation, spinning speed, and surface temperature of the superparticles, typically such superparticle are available in the deep point of a black hole or nearby surface of a singularity. The spinning speed, Tangential Velocity and Kinetic Energy of the superparticles had been increased rapidly due to tidal effect of a black hole or singularity ball. The mass, density, temperature, gravitational field, electromagnetic field, entropy, rotational frequency, spinning speed, and kinetic energy of a black hole singularity may be increased violently due to bombarding its heart with maximum numbers of superparticles during lifetime of a black hole. The radius and size of a black hole singularity changeable slightly or remains tiny as the radius of an atom or subatomic particles. An escape velocity of the particles from the external surface of the singularity increased or even exceeded the speed of light. The universe is a place of violent events and the fantastic phenomena as a whole. The superparticles and the singularity are two condensed objects that could be formed in the depths of a black hole during powerful cosmic events, or maybe formed in the laboratory by using powerful technology. We need to remove the power of particles in the future if they collide together in the black hole power plant. The black hole power plant could be established in the future and used to release huge energy from atomic particles for electricity generation and for cosmic journeys. The Schwarzschild radius of a supergiant black hole exceeded 20 light-years. The gas and dust particles at the distant points from the heart of a supergiant black hole get vibrated and annihilated to release the powerful electromagnetic radiation in the Schwarzschild radius. The Quasars and galaxy clusters have been distorted, destroyed, and heated up by tidal force of a supergiant black hole. The supergiant black holes may be collecting a huge amount of gas and dust particles in Quasars and galaxy clusters to grow rapidly. The rotational frequency and surface temperature of the black hole singularity and superparticles can be determined mathematically by using eqn. (8) and eqn. (11).

Table 1: Rotational Frequency and Surface Temperature of a Spinning Singularity and Oscillating Superparticles

Total Mass of a Singularity and Superparticles (m)	The Singularity or Superparticle Radius (r)	Rotational frequency of a Singularity or Superparticle $f = \frac{w}{2\pi}$	Surface Temperature of a Spinning Singularity or Vibrating Superparticles $T = \frac{0.0029 \text{ m.K}}{\lambda}$
80 kg	$2 \times 10^{-21} \text{ m}$	$4.77 \times 10^{38} \text{ Hz}$	$4.61 \times 10^{27} \text{ K}$
$5.97 \times 10^{24} \text{ kg}$	$2 \times 10^{-13} \text{ m}$	$1.177 \times 10^{34} \text{ Hz}$	$1.138 \times 10^{23} \text{ K}$
$2 \times 10^{30} \text{ kg}$	$5.3 \times 10^{-11} \text{ m}$	$1.938 \times 10^{33} \text{ Hz}$	$1.873 \times 10^{22} \text{ K}$
$4 \times 10^{31} \text{ kg}$	$1.97 \times 10^{-10} \text{ m}$	$3.885 \times 10^{34} \text{ Hz}$	$3.755 \times 10^{23} \text{ K}$
$3.59 \times 10^{31} \text{ kg}$	$1.26 \times 10^{-10} \text{ m}$	$4.235 \times 10^{33} \text{ Hz}$	$4.1 \times 10^{22} \text{ K}$
$2 \times 10^{40} \text{ kg}$	$1.26 \times 10^{-10} \text{ m}$	$6.44 \times 10^{28} \text{ Hz}$	$6.229 \times 10^{17} \text{ K}$
$2 \times 10^{45} \text{ kg}$	$1.52 \times 10^{-10} \text{ m}$	$3.104 \times 10^{31} \text{ Hz}$	$3 \times 10^{20} \text{ K}$

10. CONCLUSION

Black hole singularity and superparticles have been produced from the collapsed hearts of Stars or from steeply distorted and collapsed amounts of matter and energy in the core of a black hole. An external surface of a singularity ball or superparticle had been distorted, stretched out, and heated up to millions, billions, and trillions of degrees Celsius due to their violent collision event, rapid transition, and highly oscillating. The superparticles are ultra-massive and superdense types of celestial objects, and most of them had been formed at the bottom of a black hole due to the powerful tidal effect of the singularity sphere in the heart of a black hole. The superparticles have a huge rotational frequency and powerful kinetic energy to hit the singularity and penetrate its heart to feed it and change its mass. The singularity ball and superparticles have huge angular momentum, maximum spinning speed, energy, rotational frequency, and the highest surface temperature. Superparticles could be evaporated partially or entirely during direct collision with the singularity or escaping into outer space. The visible universe was a greatest type of a superparticle that was formed violently inside the supergiant black hole, then escaped into outer space, expanded, and evaporated to become a cosmic singularity and cosmic seed. The living creatures and the objects in the visible Universe were formed from collapsed matter and energy inside the supergiant black hole and released into space as a surviving superparticle. The superparticles can be evaporated and vanish entirely to form new things in nature.

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Conflict of Interest

I declare that I have no conflict of interests.

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