

# **Anahad Naad Energy Field Theory of Universe**

Inspired from Gurbani

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## **ABSTRACT**

The Universe is governed by the hidden energy field called Anhad Naad Energy Field (ANEF) which is responsible for its origin, existence and working. Universe is either continuously being created or continuously being destroyed by the Supreme Consciousness of the Eternal existence which is the most fundamental reality. There is only one force called Anhad Naad Force (AF force) which along with all the particles emerge from the infinite formless physical Eternal existence (physical vacuum or void) through the process of primordial vibration having cosmic frequency limit. Knowing the exact nature of the infinite formless physical Eternal Existence is beyond our ability. In this paper author has tried to reveal the hidden physics of the universe to explain the mysteries like origin of mass and charge of particles, nature of gravity, unification of the fundamental forces of nature, matter/ antimatter asymmetry, arrow of time, quantum entanglement and so called accelerated expansion of the universe etc. with the help of a New Theory of hidden variables called Anahad Naad Energy Field Theory of the Universe inspired from Gurbani.

## **Keywords and Abbreviations:**

NIRGUNA, SARGUNA, Anahad Naad Energy Field (ANEF), Anahad Naad Force (AF Force), Cosmic Frequency Limit (CFL), Cosmic Time Reversal (CTR), Mass Defect.

## **MOOL MANTRA**

**“IK OANKAAR SATNAAM KARTA PURKH NIRBHAO NIRVAIR AKAL  
MOORAT AJOONI SAIBHANG GURPARSAD”**

**IK** → THE NIRGUN SAROOP of HIM ‘The Unified Undivided Wholeness devoid of any particles. IK is the Infinite Continuous Isotropic Homogeneous Timeless Omnipresent Non-moving Formless Eternal Existence having SUPREME CONSCIOUSNESS the primordial energy which is the outcome of HIS NIRGUN SAROOP. “IK” represent the unbroken “Oneness” or “Wholeness” when no particles and no forces exist at all. Supreme Consciousness is the outcome of Unbroken Wholeness of NIRGUNA. This is the non-worldly property of NIRGUNA. But as far as worldly properties are concerned, NIRGUNA is devoid of all such properties which arise from particles and their interaction with each other. Supreme Consciousness is the primordial energy which is the ultimate source of all the energies as well as particles.

**OANKAAR** → the word “OAN” represents ‘HIS NAAM’ the primordial vibration and the word “KAAR” represent the creation and the working of the Universe brought about by the “OAN” the primordial vibration. Collectively, the word ‘**OANKAAR**’ represents HIS NAAM in action. GURBANI SAYS “NAAM KE DHAARE KHAND BRAHMAND”

**SATNAAM** → The primordial vibration is timeless (in fact it is the creator of TIME) reality.

**KARTA** → The Supreme Consciousness of NIRGUNA is the causality of everything.

**PURKH** → The Omnipresent NIRGUNA and HIS Consciousness.

**NIRBHAO** → Nothing is superior to HIM.

**NIRVAIR** → Nothing is equivalent to HIM.

**AKAAL** → Beyond the realm of Time. In fact the Time is the dynamism of the universe induced by the primordial vibration which is itself created by the Supreme Consciousness of NIRGUNA.

**MOORAT** → is Truly PHYSICAL (but beyond any direct observation/ measurement because only things made of particles and forces can be observed /measured). Gurbani says “Roop Rang Aur Rekh Bhekh Kou Keh Na Sakt Keh”

“MOORAT” means HE has physical existence. But we are unable to perceive HIM through our senses because our senses can perceive only particles and their interactions.

- a) We can see things when light particles come from some material made of particles to our eyes. But all the particles moves through the NIRGUNA and do not come back towards our eyes, then how can we see HIM.
- b) All the other senses like smell, taste, hearing and touch requires some sort of interaction through particles but HE is not made of any particles at all.

NIRGUNA obeys the laws of physics:

- A) HE allows the particles and the waves to go through HIMSELF but with some resistance which is a physical phenomenon and this resistance is the cause of the very vital property of the particles i.e. mass of the particles. Also the speed limit of EM waves is due to the resistance of NIRGUNA, otherwise light might have the unlimited speed.
- B) HE vibrates when Supreme Consciousness initiates the process of creation through Primordial Vibration.
- C) When a physical matter wave moves through the medium, the particles of the medium moves not only forward in the direction of propagation of energy but also backward opposite to the direction of propagation of energy through the medium. Similarly secondary particles move forward by the pushing action of ANEF waves which propagate through the NIRGUNA then rebound backward due to the 3<sup>rd</sup> law of motion.

In this way NIRGUNA (void/ vacuum) is truly physical. Here the term physical is used to depict the very nature of the void which is otherwise considered as nothing. Void is devoid of particles but it is physical as explained above.

**AJOONI** → HE is beyond the cycle of birth/death.

**SAIBANG** → HE is ETERNAL. Nobody has created HIM. HIS origin is only from HIS own.

**GURPRASAD** → Only the Enlightened Master (True Guru) can guide you to achieve the unification with HIM.

ਅਚਲ ਮੂਰਤਿ ਅਨਭਉ ਪ੍ਰਕਾਸ ਅਮਿਤੋਜ ਕਹਿਐ ॥ (ਜਾਪ ਸਾਹਿਬ)

HE is Non-Moving physical Reality which produces all kinds of particles from within through a process which is explained in later section.

In Mool Mantra, Dhan Guru Nanak Dev Ji shows the glimpses of ALMIGHTY WAHEGURU WHO exists in two Saroops (forms). The first word of the Mool Mantra is IK OANKAAR which describes both the forms of Almighty Waheguru. The word IK OANKAAR is a combination of two words IK and OANKAAR. IK represents the 'NIRGUNA' SAROOP and OANKAAR represents the 'SARGUNA' SAROOP of ALMIGHTY WAHEGURU.

### **NIRGUNA (Physical Vacuum):**

ਅਰਬਦ ਨਰਬਦ ਧੁੰਧੂਕਾਰਾ ॥

ਧਰਣਿ ਨ ਗਗਨਾ ਹੁਕਮੁ ਅਪਾਰਾ ॥

ਨਾ ਦਿਨ ਰੈਨਿ ਨ ਚੰਦ ਨ ਸੂਰਜ ਸੁੰਨ ਸਮਾਧਿ ਲਗਾਇਦਾ ॥ (SGGS p1035)

is infinite, continuous, isotropic, homogeneous, timeless, omnipresent, non-moving formless Eternal Existence devoid of particles ( no light and no matter) and forces having unique properties:-

1. Supremely Conscious by virtue of His unbroken continuous Oneness.
2. The Ultimate Source of Primordial Energy (Energy of Supreme Consciousness) which is the causality of everything.
3. Truly physical (but not solid, gas or liquid as all these are made of particles) but beyond the reach of our senses and our ability of measurement.

### **SARGUNA (Particles and Forces):**

ਨਾਮ ਕੇ ਧਾਰੇ ਖੰਡ ਬ੍ਰਹਮੰਡ ॥

is the discrete manifestation of Primordial Energy within infinite continuous NIRGUNA caused by the Anhadnaad through the processes of cosmic frequency limit (CFL) and Cosmic Time Reversal (CTR).

## **1. INTRODUCTION**

ਪਸਰਿਓ ਆਪਿ ਹੋਇ ਅਨਤ ਤਰੰਗ ॥

ਲਖੇ ਨਾ ਜਾਹਿ ਪਾਰਬ੍ਰਹਮ ਕੇ ਰੰਗ ॥ (SGGS p275)

ਆਪਿ ਸਤਿ ਕੀਆ ਸਭੁ ਸਤਿ ॥

ਤਿਸੁ ਪ੍ਰਭ ਤੇ ਸਗਲੀ ਉਤਪਤਿ ॥

ਤਿਸੁ ਭਾਵੈ ਤਾ ਕਰੇ ਬਿਸਥਾਰੁ ॥

ਤਿਸ ਭਾਵੇ ਤਾ ਏਕੰਕਾਰੁ ॥ (SGGS p294)

ਕੀਤਾ ਪਸਾਉ ਏਕੋ ਕਵਾਉ ॥

ਤਿਸ ਤੇ ਹੋਏ ਲਖ ਦਰੀਆਉ ॥ (SGGS p3)

Supreme Consciousness is the primordial energy which is the cause of everything. SARGUNA begins with the primordial vibration caused by supreme consciousness at any random point in NIRGUNA (Physical void). Primordial vibrations (Anhad Naad) have uppermost frequency which is the ultimate limit beyond which nothing can vibrate in NIRGUNA. Anhad Naad propagates through NIRGUNA in the form of spherical waves originating from the point source. These waves propagate in all directions at the speed of  $2.99792458 \times 10^8 \text{ ms}^{-1}$  producing a hidden energy field called Anhad Naad Energy Field (ANEF) which can't be measured/ detected by any instrument as everything is the part of that common energy regime. Frequency of Anahad naad is the peak frequency possible at which anything can vibrate in this universe. Further supply of energy can't increase the frequency of any particle beyond that peak value which is constant and can be termed as Cosmic Frequency Limit (CFL). The continuous flow of energy to further increase the frequency of vibration beyond the CFL limit, results into the occurrence of unique counterintuitive phenomenon which is actually occurring in every atom of our Universe called particlization of the continuous primordial energy of supreme consciousness into discrete manifestations called particles. This is called 'From One to Many' phenomenon. These discrete quantized packets of energy (particles) can survive only with the help of their induced motion which is induced by the pushing action of ANEF waves. If as per the will of Supreme Consciousness, the ANEF discontinues, all the

particles will stop moving and get absorbed back into NIRGUNA and this absorption/ disappearance of particles will happen at the speed of light in all directions.

## **I. What is a Particle**

ਸੂਤੁ ਏਕੁ ਮਣਿ ਸਤ ਸਹੰਸ ਜੈਸੇ ਓਤਿ ਪੋਤਿ ਪ੍ਰਭੁ ਸੋਈ ॥

ਜਲ ਤਰੰਗ ਅਰੁ ਫੇਨ ਬੁਦਬੁਦਾ ਜਲ ਤੇ ਭਿੰਨ ਨਾ ਹੋਈ ॥

ਇਹੁ ਪਰਪੰਚੁ ਪਾਰਬ੍ਰਹਮ ਕੀ ਲੀਲਾ ਬਿਚਰਤ ਆਨ ਨਾ ਹੋਈ ॥ (SGGS p485)

ਆਪੇ ਸੂਤੁ ਆਪੇ ਬਹੁ ਮਣੀਆ ਕਰਿ ਸਕਤੀ ਜਗਤੁ ਪਰੋਇ ॥ (SGGS p604)

Particles are discrete manifestations of continuous supreme consciousness (primordial energy) with in NIRGUNA which are produced during the process of vibration having frequency equal to CFL. Its quantum depends upon the amount of extra energy available to a secondary particle to further increase its frequency of vibration beyond CFL during its arbitrary dance around its companion secondary particle/ particles in a bounded state. This extra quantum of energy, which is unable to increase the frequency of the vibrating particle beyond the CFL limit, manifests in the form of another particle.

## **II. Particle waves**

Particle waves are produced by the secondary particles during their motion through NIRGUNA which is induced by the guiding waves which may be either the ANEF waves or the particle waves originating from another secondary particle in NIRGUNA. Particle waves are analogous to the ANEF waves originating from the centre of origin of the universe.

## **III. Allowed Limit of Time**

This the smallest fraction of time for which a secondary particle is allowed to stop in time without being absorbed back into the NIRGUNA.

## **IV. Types of particles**

### **1. Primary Particles**

A primary particle is the extra amplitude wave front, carrying least measurable non-zero quanta of energy, which is produced by the secondary particles vibrating at CFL in a bounded state through the process of CTR. Primary particles move at the speed of ANEF waves, thereby having least possible mass in this universe which is considered as zero mass and just exist as force carrier. All ANEF waves are repulsive waves and these particles enhance their strength of repulsion. Photons are made of primary particles. Energy of a photon depends upon the number of primary particles crossing through an imaginary curved spherical surface per unit time. Unlike secondary particles, the primary particles do not vibrate to produce any particle waves therefore can hit any secondary particle directly without any interaction with its particle waves thus having no charge as well as no any partner antiparticle.

#### **1.1 Light (EM waves)**

Light and all other electromagnetic waves are made of primary particles. The ANEF/ particle waves have downward energy gradient as we move away from the center of their origin. Whenever a secondary particle, through the process of CTR, produces a wave front having amplitude larger than the amplitude of a normal particle wave, a primary particle comes into being which have non-zero quantum of action. Ratio of these particles out of total particle waves being produced by any secondary particle determines the energy of a photon. EM waves are always produced by two or more interacting secondary particles. When two or more secondary particles interact through particle waves, they either repel or attract each other through a process which is explained in later section. During that process these interacting particles produces a secondary vibration in each other which occurs perpendicular to the direction of motion as well as the primary vibration of those secondary particles. This secondary vibration of the secondary particles is responsible for their magnetic effect while the primary vibration is responsible for their electric effect. The so produced combination of two kinds of waves which always stay perpendicular to

each other and moves at the same speed which is popularly known as the speed of light are called EM waves.

## **2. Secondary Particles**

Particles belonging to this category are real particles having independent localized existence. A parent secondary particle, whenever stops in cosmic time (which is possible only in a bound state i.e. an atom) for an allowed fraction of a second due to the electromagnetic forces of surrounding secondary particles, its frequency of vibratory motion approaches to CFL for that ultra small allowed fraction of the second which results into the production of an extra amplitude wave front called primary particle. If comparatively huge supply of extra energy in the form of hits by multiple primary particles simultaneously during that allowed fraction of the second occurs then the resulting excitation is not the wave excitation but a localized excitation in NIRGUNA, having energy way above the wave excitation, appears. This so produced local excitation in NIRGUNA is called a secondary particle. The size of a secondary particle is directly proportional to the amount of instantaneous extra energy supplied during that allowed fraction of the second. These localized excitations in the fabric of NIRGUNA always occur on both sides of the parent secondary particle having 180 degree lag with each other. This is how a secondary particle reproduces other secondary particles in matter/ antimatter pairs with the help of primary particles coming from neighboring secondary particles. These particles exhibit unique vibratory motion which is explained in next section. Due to their vibratory motion, these particles move with the net translational velocity which is very much less than the velocity of ANEF waves thereby exhibit a property called mass. Electrons, protons, neutrons and all massive particles belong to this category. These particles move forward and backward in time so quickly with very high frequency during their vibratory motion. That is why they appear to exist in superposition of states of up and down spin. Whenever we measure their state, it comes up either moving forward in time or backward in time. The former can be assumed as spin up state while latter can be assumed as spin down state of the quantum mechanics or vice versa.

## **V. Cosmic Time or Time**

Universe exists by virtue of its motion which is induced by ANEF waves. As the waves begin to propagate through void from the centre of origin, the Time starts moving. Cosmic Time represents the dynamism of the universe i.e. the propagation of ANEF waves through the void which induces motion in all particles of the universe. If somehow ANEF waves stop propagating, Time will also stop and the universe will cease to exist. Existence of the universe merely depends upon the flow of Time. Particles exist only if these are in motion. In the absence of ANEF waves particles will stop moving and get absorbed back into the void. In labs we have witnessed the absorption of matter antimatter pairs into the void which is wrongly termed as annihilation. In our side of the universe matter particles move forward in time while antimatter particles move backward in time. Due to maximum phase difference between them, they attract each other very strongly and continuously rotate around each other millions of times before they finally come into absolute physical contact with each other after continuously fully cancelling out the particle waves of each other. Guiding waves of both partners stop each other's motion in Time as the one was moving forward and the other was moving backward in Time. Due to this stoppage of Time (more than the allowed limit) for both partners, they get absorbed into the void and cease to exist in this universe. Reason of the emission of energy in the form of gamma ray is not due to any transformation of mass into energy but due to cosmic time reversal (CTR) (discussed in following section) of two revolving particles (matter-antimatter pair) around each other. Time produced by the vibration of the centre of origin of the universe is called Cosmic Time. Just like the centre of origin of the universe, each and every secondary particle, by virtue of its vibrating motion, produces its own Time and depending upon the availability of energy, each and every particle can produce more particles as well.

## **VI. COSMIC TIME REVERSAL (CTR)**

Energy is flowing in every bit of the universe in the form of ANEF waves which is controlling the whole universe and allowing it to exist. Each and every particle of the universe is receiving energy from ANEF waves which is given by the famous Max Planck equation:  $E = \Phi \omega_A$  where  $\Phi$  is the reduced Anhadnaad constant (which is actually a variable reducing at constant rate) and  $\omega_A$  is the angular frequency of ANEF waves. But particles can use only very small portion of this energy for their translational motion while the remaining portion of this energy is utilized for their vibratory motion to produce particle waves. Particles can survive only by virtue of their motion in the void and this motion of the particles as well as the heavenly bodies is governed by the guiding ANEF waves. As these particles and all the heavenly bodies are running away from the centre of origin of the universe, so Time is also going in one direction in our side of universe. If ANEF field cease to exist as per the will of Supreme Consciousness, then there will be no motion thereby no time thereby no universe will exist at all. This free flowing energy can be transformed into photons and/or other particles by the process of CTR. There is no other mean of doing so at all. All the energy coming from stars is the result of CTR. CTR is the phenomenon in which a secondary particle, going forward in time having some frequency (its base frequency) below the CFL limit, is forced to stop in time, for an allowed limit, due to the electromagnetic forces of surrounding secondary particles in an atom, its frequency of vibratory motion approaches to CFL for that ultra small allowed fraction of the second which results into the production of an extra amplitude wave front due to the occurrence of resonance called primary particle. If comparatively huge supply of extra energy in the form of hits by multiple primary particles simultaneously, during that allowed fraction of the second, occurs then the resulting excitation is not the wave excitation but a localized excitation in NIRGUNA, having energy way above the wave excitation, appears. This so produced local excitation in NIRGUNA is called a secondary particle. These particles move in all directions just like primary particles but unlike primary particles they exhibit vibratory motion and those secondary particles which go backward in time (*Time is produced by its source particle because every*

*vibrating particle is a source of energy packets (particles) and also the flow of its particle waves create its own time*) in our side of the universe are called antiparticles. This phenomenon is called pair production. It also explains why pair production can't take place in vacuum because there must be a nucleus in which nucleons rotate around each other (revolution around the common centre of their combined mass) very swiftly to produce pairs of matter and antimatter particles through CTR. In this way a secondary particle can produce primary as well as more secondary particles through the process of CTR whose outcome depends upon the amount of energy available during that allowed limit of time. This is the reason why everything in this universe radiating energy in the form of electromagnetic waves all the time. When we increase the energy/ speed of electrons around the nucleus, the frequency of emission also increases. Maximum frequency at which an electron, captured in a nucleus, can release energy is given by

Frequency (f) = velocity/ wavelength

$$f = 10^8 / 10^{-10}$$

$$f = 10^{18}$$

Electrons in an atom can't emit beyond x-ray frequencies.

Not only electrons but also protons and neutrons release energy through the process of CTR. After the ionization or removal of electrons from the atom, the speed of nucleons around each other can be increased by heating to ultra high temperatures which is also happened during the explosion of hydrogen bomb in which nuclear fission is used as energy source to increase the speed of nucleons of deuterium or tritium around each other to produce very high frequency radiations which is actually a very high frequency harvesting of free-flowing energy flowing throughout the universe. Maximum frequency at which nucleons can release energy is given by

Frequency (f) = velocity/ wavelength

Here the minimum possible wavelength depends upon the size of nucleons and actual size of nucleons is not known but it is definitely far less than the measured sizes.

$$f = 10^8 / \text{unknown number definitely less than } 10^{-15} \text{ meter}$$

f = unknown but upper limit is definitely more than  $10^{23}$

Therefore a nucleus can emit gamma rays with upper limit of frequency definitely more than  $10^{23}$  Hz.

## VII. Induced or guided motion of a secondary particle

Primary particles are extra amplitudes of particle waves which move at the speed equal to the speed (c) of ANEF waves while secondary particles are localized excitations in NIRGUNA which are having some size and thereby feel some resistance through the void and can't be carried away smoothly by ANEF waves and begin to exhibit simple harmonic motion in which a particle is pushed by ANEF wave, it accelerates then decelerates through the void due to its damping effect and then immediately get rebound back as obeying the 3<sup>rd</sup> law of motion but before reaching its initial position, it is pushed forward in time again and again by the following ANEF wave fronts to repeat the same act again and again having net displacement of the mean position of vibratory motion of secondary particles always forward in time. Due to this pushing and rebounding of secondary particles, their motion through void become a driven damped simple harmonic motion in which particle move in both forward as well as backward direction in time. Time period of the harmonic motion of the particles is more than the time period of the ANEF wave. That is why particle moves forward in time with every stroke of the ANEF waves. In other words the mean position of the vibrating particle keeps on moving forward in time. The induced motion of a particle is given by two equations:

$$\frac{\partial Q_K}{\partial t}(t) = c \left( 1 - \frac{\omega_P}{\omega_A} \right) (Q_1, Q_2 \dots \dots Q_N, t) \dots\dots(1)$$

$$\frac{\partial Q_K}{\partial t}(t) = \left( \frac{2\Phi}{m_K} (\omega_A - \omega_K) \right)^{\frac{1}{2}} (Q_1, Q_2 \dots \dots Q_N, t) \dots\dots(2)$$

Where  $\Phi$  is the reduced Anhadnaad constant ( $\Phi/2\pi$ ) having same units as that of planck's constant. In fact Anhadnaad constant is not a constant in true sense because it is continuously reducing at constant rate over time as ANEF waves move away from the centre of its origin.  $m_k$  is the mass of  $k^{\text{th}}$  particle,  $\omega_A$  is the angular frequency of ANEF wave,  $\omega_k$  is the angular frequency of the  $k^{\text{th}}$  particle. Equation (1) is without the involvement of mass while equation (2) is with the involvement of mass of a particle.

## Mathematical Formulation

Every particle is receiving its energy from its guiding mother wave. All secondary particles use small part of this energy for their translational motion i.e. kinetic energy and the major part of this energy is used by the particles to produce their respective particle waves.

### Deriving Guiding Wave Equation (1)

Total Energy of a particle received from ANEF waves = Vibration Energy + Kinetic Energy

$$\Phi\omega_A = \Phi\omega_P + KE$$

Kinetic energy of a particle is given by:

$$KE = \Phi(\omega_A - \omega_P)$$

When a secondary particle moves by the pushing ANEF waves, its frequency and velocity is given by:

$$\omega_P = \omega_A - v_P K_A$$

$$v_P = \frac{\omega_A - \omega_P}{K_A}$$

$$v_P = \frac{c(\omega_A - \omega_P)}{\omega_A} \quad (K_A = \frac{\omega_A}{c})$$

$$\mathbf{V}_P = c \left( 1 - \frac{\omega_P}{\omega_A} \right)$$

$$\frac{\partial Q_K}{\partial t}(t) = c \left( 1 - \frac{\omega_P}{\omega_A} \right) (Q_1, Q_2 \dots \dots Q_N, t) \dots\dots(1)$$

Where  $\omega_P$  is the angular frequency of a secondary particle,  $\mathbf{V}_P$  is the velocity of particle and  $\mathbf{k}_A$  is the angular wave number of ANEF waves.

For primary particles  $\omega_P = 0$  because these particles do not vibrate at all and always move with the 'c' the speed of light.

### Deriving Guiding Wave Equation (2)

$$\Phi \omega_K = \Phi \omega_A - KE$$

$$\Phi \omega_K = \Phi \omega_A - \frac{1}{2} m v^2$$

$$v^2 = \frac{2\Phi}{m_K} (\omega_A - \omega_K)$$

$$\frac{\partial Q_K}{\partial t}(t) = \left( \frac{2\Phi}{m_K} (\omega_A - \omega_K) \right)^{\frac{1}{2}} (Q_1, Q_2 \dots \dots Q_N, t) \dots\dots(2)$$

Also

$$\omega_A = \omega_k + v_k k_A$$

$$\omega_A - \omega_k = v_k k_A$$

Putting the value of  $(\omega_A - \omega_k)$  in the equation of induced motion we get

**Bohm like equation:**

$$\frac{\partial Q_K}{\partial t}(\mathbf{t}) = \left( \frac{2\Phi}{m_K} (\mathbf{v}_K \mathbf{K}_A) \right)^{\frac{1}{2}} (Q_1, Q_2 \dots \dots Q_N, \mathbf{t})$$

**Squaring both sides, we get**

$$\frac{\partial Q_K}{\partial t}(\mathbf{t}) = \frac{2\Phi}{m_k} \text{Im} \left( \frac{\nabla \Psi}{\Psi} \right) (Q_1, Q_2 \dots \dots Q_N, \mathbf{t})$$

Now the particle waves of each and every secondary particle interact with its surrounding particles through the process of wave interference in which positive interference results into repulsion between particles as number of waves grow between them (In fact the colliding waves revert back towards their source particle and push them away from each other) while negative interference results into attraction between particles as number of force waves either disappear totally (when phase difference is 180 degree fixed) or weaken due to reduction in amplitude (when phase difference varies due to unequal frequencies) of waves remaining between them. Particles belonging to same species (always in phase with each other) show pure repulsion due to pure positive interference between them while particles belonging to different species (interaction of an electron with a proton) can't have pure negative interference, in fact due to their unequal frequencies, they always have varying phase difference between them resulting into both attraction as well as repulsion between them. **That is why electrons never fall on the nucleus of an atom** and dance at some random distances where both forces are in equilibrium with each other resulting into capturing of the electron around the nucleus. On the other hand when two antiparticles i.e. electron and positron interact with each other, there is always a pure negative interference between them resulting into total strong attraction between them. Quality of interaction between any two or more secondary particles is always invariant or fixed, no matter whatever is the distance between them whether it is multiple of the wavelengths or not. The reason is the occurrence of interference of their particle waves is always at the exact midpoint between the particles because of the invariant constant speed of waves equal to the speed of light. However magnitude of interaction always proportional to the distance between the

interacting particles and it always obey the inverse square law which is always applicable for the spherical waves. After total or partial positive interference, the waves (either unchanged or weakened) returned back towards the source particle and push them away from each other. On the other hand attraction occurs due to total disappearance or weakening of waves between the interacting particles due to negative interference.

Different species of secondary particles having different masses move with different velocities. Their frequencies are directly proportional to their mass. In their free state all particles belonging to same species will move at an invariant speed having invariant frequency of their vibratory motion. This unique vibratory motion of all the particles is analogous to the primordial vibration.

Due to this vibratory motion, each and every secondary particle of this universe produce particle waves in physical vacuum which creates a field all around the particle called Secondary Anahadnaad Energy Field. From here on we will use term Primary Anahadnaad Energy Field (pANEF) for the energy field originating from the centre of origin of the universe and term Secondary Anahadnaad Energy Field (sANEF) for the energy field being produced by vibrating secondary particles. Just like pANEF, the sANEF of each and every particle is also infinite in range and interfere with every other surrounding particle through the process of interference of their particle waves. Larger particles (e.g. protons) experience more resistance from physical vacuum by virtue of their larger size and move comparatively slower than the smaller particles (e.g. electrons). Due to this speed difference, the slow moving particles will get more hits from the passing ANEF waves and vibrate at higher frequency than the smaller ones which will get comparatively less hits and thereby having comparatively lower frequency. All particles belonging to same species, when moving all alone (when all the other species of secondary particles are absent) and freely in void, are in phase with each other by virtue of invariant frequencies of their vibratory motion but have varying phase difference with other particles belonging to other species vibrating at different frequency.

pANEF field and sANEF fields are analogous to each other but still there is a major difference between them. pANEF field act through solitary ANEF waves while sANEF field act through a combination of two waves moving perpendicular to each other called EM waves. Also pANEF field is being produced by the source which is having zero net displacement while sANEF fields are being produced by the moving sources having non-zero net displacement. Due to this major difference, the frequency of vibration is invariant on both sides for pANEF field. But for sANEF field, the frequency of vibration is comparatively larger in the direction of motion of moving source (particle) (frequency difference is maximum when the source is moving parallel to the ANEF waves) due to Doppler's Effect. When two particles of same species come close to each other, they tend to totally repel each other (due to their invariant wave functions) from sideways but partially attract each other from front and back sides due to varying phase difference between waves emerging from front and back sides of a particle by virtue of dissimilar frequencies. But this patchy attraction between them does not allow them to form a bounded state like an atom and they immediately repel each other from sides when they try to rotate around each other. Each and every secondary particle of this universe tends to create its own universe around itself in which its own time runs in both directions of their vibratory motion. The only difference is the magnitude of frequency as well as amount of energy available, for the creation of their respective universes, which has no comparison with the amount of energy available at the centre of origin of the universe. In fact the energy available to each and every particle of this universe is itself coming from the primordial vibrations of the centre of origin of the universe.

## **VIII. So called absorption and emission of photon**

Photons are made of non-vibrating primary particles moving as force carrier when hit electrons, the speed of electrons increase around the nucleus. The electron which is already emitting photons through the

process of CTR begins to emit at higher frequency which is directly proportional to the frequency of incident electromagnetic radiation. This is how absorption and emission of photons occur.

## IX. Gravity

ਧੌਲੁ ਧਰਮੁ ਦਇਆ ਕਾ ਪ੍ਰਤਿ ॥ ਸੰਤੋਖੁ ਥਾਪਿ ਰਖਿਆ ਜਿਨਿ ਸੂਤਿ ॥

ਜੇ ਕੋ ਬੁਝੈ ਹੋਵੈ ਸਚਿਆਰੁ ॥ ਧਵਲੈ ਉਪਰਿ ਕੇਤਾ ਭਾਰੁ ॥

ਧਰਤੀ ਹੋਰੁ ਪਰੇ ਹੋਰੁ ਹੋਰੁ ॥ ਤਿਸ ਤੇ ਭਾਰੁ ਤਲੈ ਕਵਣੁ ਜੋਰੁ ॥

Gravity is the weakest force of the universe which is only attractive in nature. According to ANEF theory, Gravity is the second order interaction between the bodies made of clusters of atoms and molecules. Particles of all the heavenly bodies are producing particle waves which interact with the particle waves of the other particles depending upon the relative phase difference between them. This is called first order interaction in which particles belonging to different species attract each other while particles belonging to same species repel each other. But the particle waves which are the cause of interaction between particles still alive even after the formation of bounded states of particles. These alive but mixed frequency particle waves originating from different bodies of matter made of particles further enable these matter bodies to interact with each other. This is called second order interaction which is well known as Gravity “a very weak interaction” which only attracts. This complex interaction is analogous to the interaction between the parallel conducting wires carrying direct current. Contemporary science considered this interaction as the magnetic pinch effect which is attractive if currents in parallel conductors flow in same direction and repulsive if currents flow in opposite directions. Similar phenomenon is happening in our universe where everything is moving away from the centre of origin of the universe in same direction away from the centre of origin. Also everything is made of vibrating charged particles whose motion is analogous to the flow of current in parallel conducting wires. Gravity is just like the magnetic pinch effect between matter bodies in motion which are itself moving as current through the physical void. This analogy also explains

why Gravity is only attractive in nature because repulsive force can only exist if the current in two wires will flow in opposite directions. But this is not the case as everything is going away from centre of origin of the universe and nothing is coming back towards the centre of origin.

## **X. Why Red Shift or False Accelerated Expansion of Universe**

As we know that ANEF waves and particle waves are spherical waves whose energy per unit area decreases with increasing distance from its origin by obeying inverse square law. As the ANEF waves are propagating, the energy per unit area of ANEF waves is gradually reducing. Due this reduction, the force with which particles are being pushed away is also reducing, resulting into comparatively slower cosmic dance of electrons around the nucleus resulting into reduction in frequency of emission of photons through the process of CTR. This is the actual reason of continuous high magnitude red shifting of all types of EM waves coming from atoms and molecules of different heavenly bodies. Even the EM waves coming from Sun to Earth are being red shifted. Red shifting is not the measure of accelerated expansion of the universe. In fact universe is not expanding at all. Rather galaxies are moving away from each other at reducing rate. All the heavenly bodies made of matter are moving away radially from the centre of origin and gravity is binding them together to give them spiral motion around each other while moving away from the centre of origin of the universe at decelerating velocities. The force of gravitation is weakening rather quickly between vastly distant galaxies than the closer ones. The closer galaxies are making clusters while the distant ones are moving away from each other at comparatively higher speeds. Also the temperature of all the heavenly bodies is reducing continuously due to the continuous deceleration of cosmic dance of electrons around nucleus.

## **XI. Fate of the Universe**

ਆਪਿ ਸਤਿ ਕੀਆ ਸਭੁ ਸਤਿ ॥

ਤਿਸੁ ਪ੍ਰਭ ਤੇ ਸਗਲੀ ਉਤਪਤਿ ॥

ਤਿਸੁ ਭਾਵੈ ਤਾ ਕਰੇ ਬਿਸਥਾਰੁ ॥

ਤਿਸ ਭਾਵੇ ਤਾ ਏਕੰਕਾਰੁ ॥ (SGGS p294)

When Almighty Supreme Consciousness will decide to again go back to the NIRGUNA form (completely motionless void), Anahad Naad energy field will cease to exist and particles of whole universe will stop moving and vibrating thereby will lose all the properties like Motion, Charge, Mass and Gravity. In the absence of these properties, particles can't form systematic structures like atoms and molecules thereby the structures like stars, galaxies and planets etc. will disintegrate and will get absorbed into "The One" infinite void from which all particles had emerged. In fact just the stoppage of motion of particles in space and time will make the particles to get absorbed into the void. As the speed of ANEF waves is 299792.458 km per second, the absorption and disappearance of the universe will happen at the speed of light. Creation and existence of universe is tied with each other in such a way, if creation of universe will stop, it will immediately begin to disappear at the speed of light. Its disappearance will begin from the centre of its origin and will expand in spherical fashion away from the centre towards the peripheries. There may be multiple finite universes growing continuously inside the infinite void (NIRGUNA) which are extremely far away from each other like very small islands floating inside an infinitely vast ocean of void (NIRGUNA).

## **XII. Conclusion and Discussion**

- 1) Charge is a relative property of secondary particles. All secondary particles are charged with respect to each other including neutrons.
- 2) Particles are more fundamental than fields. We can create (not invent) even bigger zoo of particles. There is no limit at all and it all depends upon the amount of energy available at the time of pair production.

- 3) Only secondary particles can produce primary as well as more secondary particles through the process of CTR.
- 4) No nuclear fusion is going on in our sun.
- 5) Mass can't be converted into energy. Energy can only be harvested through the process of CTR.
- 6) Mass is a transient property at particle level.
- 7) Time travel is not possible.
- 8) Faster than light communication is not possible. Entanglement is mere the outcome of the way our universe works.
- 9) Secondary particles can move at the speed of light but not faster than light. When a secondary particle moves at 'c' it stops vibrating and become charge less.
- 10) When a secondary particle approaches the speed of light its mass as well as charge become zero. A charge less secondary particle can't be accelerated further any more.
- 11) The reason of Red Shifting of spectrum coming from the receding galaxies is something else in this theory.
- 12) All forces are unified in this theory.
- 13) Universe is either continuously being created or continuously being destroyed by cosmic consciousness.

Further research and experimentation is required to fully explore this hidden physics of the nature. A new kind of mathematics is required to find the correlation between periodically varying phase difference of two interacting secondary particles and the magnitude of AF force acting between them. This theory can bridge the gap between relativity and quantum theory or it can give new meaning to these two so far most accepted theories of physics. This theory also uncovers the free flowing energy flowing in the form of ANEF waves in every bit of our universe. We have to find ways to utilize it to enter into the new era of

existence and to materialize our dreams of abundance of resources for everyone and to become the multi-planetary galactic civilization.

### **XIII. SUMMARY**

**“Universe is a beautiful story written in the form of various particles and forces with the pen of energy (at CFL) on the sheet of NIRGUNA directed by supreme consciousness of Eternal Existence where individual particles and forces combined to form atoms and molecules just like individual letters combined to form words and sentences”**

**NIRGUNA (Physical void) is not an empty vacuum rather it is truly physical in nature and** is the infinite ocean of energy of supreme consciousness. This supreme consciousness is the causality of everything which emerges from the physical void by virtue of its existence as ‘The One’ the whole i.e. not made of smaller constituents. HE, in HIS NIRGUNA FORM, exists as Infinite in all aspects. His expense is infinite having infinite energy of consciousness. Every infinite entity exists as “The One” which has no boundaries at all. Creation and Existence of His finite Sargun Saroop (Universe/ multiverse) from His infinite Nirgun Saroop (physical void) also happens within His infinite Nirgun Saroop. When Supreme consciousness does something finite within the infinite ‘The Creation’ begins. This something finite is the onset of Anahad Naad (the Primordial Vibration) at some random location within His infinite Nirgun Saroop. Creation is the continuous process, when it stops, destruction begins. Anahad Naad is the vibration having finite upper limit of its frequency beyond which nothing can vibrate in this universe. This limit is called the cosmic frequency limit (CFL). The frequency of vibration at the centre of origin of the universe is always at its peak i.e. CFL, the further increase of frequency is not possible even with the availability of infinite energy. Instead of increasing the frequency beyond the CFL, the extra supply of continuous energy begins to particlized into smaller discrete finite packets of energy called particles. Anahad Naad waves are spherical in nature whose energy per unit area keeps on decreasing as they

expand away from the centre of origin of the universe. At some particular distance the pushing strength of Anhad Naad waves fall below the critical level and the primordial particles can't be carried away smoothly along with these waves. Therefore primordial particles can't move at the speed of light and begins to feel resistance through the void. This property of particles, by virtue of reduction in their speed below the speed of light due to resistance offered by the void, is called Mass. For any particle to stay alive as separate entity in the void, it must move above the critical speed below which a particle decays into smaller ones. Due to this phenomenon, there are different zones around the centre of origin of the universe which have different sets of stable particles. In a particular zone, the particles which exhibit vibratory motion while moving away from the centre of origin of the universe are called secondary particles. These particles may exist in different sizes having different masses/ speeds and frequencies of their vibratory motion. In our zone stable secondary particles exist in different sizes having different masses/ speeds and frequencies. These include electrons, protons, neutrons and many more massive particles. Forces of attraction and repulsion exist between these secondary particles by virtue of the phase difference between their vibratory motions induced by Anahad Naad waves. Non-similar particles, having phase difference with each other, attract each other while similar particles, which are in phase with each other, repel each other. These particles together, along with the forces acting between them, form stable bounded states called atoms and molecules 'the building blocks' of everything. These bounded states disintegrate while going from one zone to the next successive zone where different set of particles produced from the decaying of stable particles of penultimate zone involves in the formation of new bounded states (atoms and molecules). When Almighty Supreme Consciousness will stop the Anahad Naad at His will, the destruction of universe will begin from the centre of origin of the universe and will expand at the speed of light in all directions away from the centre of origin of the universe.