

The Origin of Particles

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Abstract The emulsion exists ubiquitously. The mass loves to be segregated based on its inherited similarity. Since everything is made from atoms/nucleus/electrons, it is not surprised to know that those little creatures share same flavor with their bigger brothers e.g. oil and water. In a lab, the nuclear emulsions have been well studied and used to investigate fast charged particles like nucleons or mesons [1] [2]. Similarly, the author further reasons that the phenomenon of emulsions may very well exist for sub-nucleon particle, more specifically, photons! The photons distinguish themselves with various wave length and frequencies. The photons of similar wave length/frequency maybe segregated in the emulsion soup of electron and/or dissidentphotons with different wave length/frequencies! The big bang Nucleosynthesis is a well-established fact in our physics [3]. The author has subsequently linked gamma ray photons to our big bang [4]. Based on the conservation law of mass, our galaxies must come from particles generated from a big bang, rather than from nothing. More specifically, our nucleon and sub-nuclear particles are all from photons, because the photons are the only option for linking our mass to a big bang of high energy particles/ λ ray photons! The dark matter is a congregation of photons forming immediately after a big bang! The visible galaxies appear later. It is the emulsion power that drives photons to be segregated base on their similar wavelength/frequencies. The bundled photons are building blocks for forming protons, neutrons, black matter and so on. Before photons are coupled /bundled, they manifest no gravity effects; therefore, the emulsion force is the main force behind segregation. Once photons are coupled, they may manifest gravity effects [4] and gain ability to attract electrons which further stabilize the structure of bundled photons or neutrons [5]! What confuses people is our perception of photon – how storming particles with speed of light is able to “slow down” and become part of emulsion soup. Because the mass or quarks sit there orbiting rather than storm with speed of light. The missing link is now founded; it is “photon bonding/coupling”!—a recent remarkable discovery called Rydberg blockade by coaxing photons into bonding together to form “molecules”—a state of matter by a group led by Harvard Professor of Physics Mikhail Lukin and MIT Professor of Physics Vladan Vuletic [6]. The primary objective of this study is to uncover the origin of all particles and map the mass evolution in the discipline of basic physics.

Keywords Particles, Photons, Photon bonding, Dark Matters, Gamma Ray, Big Bang, Origin of Universe

1. Introduction

The linkage of a big bang to high energy particle or λ ray photons is crucial for fundamental particle study since our tools are often limited when we try to dissect our tiny little bit creatures named particles! However, all roads lead to Rome. The correct understanding of our universe origin will help us understand our particle world! If our big bang is truly a “high energy particle” blast, based on conservation law of mass, we can be 100% confident in pinning down photons are the most basic building block for all particles and so on! In other words, all particles indeed have same single origin!

The particle world holds the answer for everything. Unfortunately, limited by our digging tools, everyone tumbles at quark level. Without forming any new theory beyond basic physics! The author can assure everyone

that quark is originated from “settled” photons! This conclusion is supported by big bang theory, because all masses are the products from a big bang which is a high energy particle blast.

Unfortunately, no matter how weak a laser/light source we use, we are far from isolating a single photon or a single proton in our lab which demands absolute temperature “near” zero! It is that reason we cannot pin down anything beyond quark in experiment. However, the tremendous “slowing down” of flying photons (uncoupled photons) in extreme cold medium supports the hypothesis that photons can be emulsified! Other than emulsion power, there is no other candidate force that can be “remotely possible” used to explain the phenomenon of photon bonding [6]! The emulsion appears to exist ubiquitously; the only exception is void space. Nothing can be emulsified against void. Fortunately, our universe is never a void place [4]! In 1964, Cosmic microwave background (CMB) was discovered by Arno Penzias and Robert Wilson [7]! The CMB provides a perfect universal emulsifying background agent in space!

Biological photosynthesis is another common natural

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phenomenon where photons are captured and incorporated in mass. The maximum amount of photosynthesis per incident unit of energy is at a wavelength, around 650 nm (deep red). If we limit the supply of quantity of such red solar lights on chlorophyll (other words, not to overwhelm it), the lights of study will be disappeared entirely right in front of our eyes! Unfortunately, the widely used term “light absorption” is a very ambiguous word that covers the most remarkable process in particle physics! The photosynthesis of apple tree leaves contributes to apple tree weight/gravity [4]! Apparently, the solar photons of wavelength 650 nm cannot be bounded at nuclear level or proton/neutron level of apple tree, otherwise, the different atoms will be created if proton/neutron mass number is changed by photosynthesis! The equation $\text{CO}_2 + \text{H}_2\text{O} + \text{Solar photons} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6$ (glucose) + O_2 tells us there is no changing of atoms during photosynthesis. The author, therefore, can safely deduce that solar lights are bonded at sub-particle level! No matter how fancy the particles act, they are all made from same origin foundation particle- the photons! There is a “zoo” of particles, which may simply correspond to light with “zoo” of different wavelength/frequencies before such photons are captured. The different wavelength/frequencies a photon once owned, cannot be disappear based on the conservation law of mass and energy, therefore, it affords “different character” possible for particles!

In any soup of distinguished different type of mediums, the photons of similar wave length/frequencies will be congregated together through a well-known process called emulsion! Because other than emulsion power, there is no other candidate force that can be “remotely possible” used to explain the phenomenon of photon bonding [6]!

To stable the “bonded” photon structure, also known as Neutrinos, we need electrons! On the other hand, electrons are stabled by “bonded” photon structure as well. The stable effects between them are mutual! The author’s view is supported by nuclear reaction, in which, if photon strike/disturb the neutrinos, the electrons will be excited. It is also evidenced in “Bond Softening” experiment [8]!

2. Solar Photons, Photon-bonding and Photon Emulsion

We all love our sun, because it tans us, but little we know, the sun also serves a greatest particle lab for us free of charge! There are tremendous amount of photons coming out of sun every second, but the sun is not made of photons! The sun is mainly made of hydrogen along with other elements but photons [9]! So, where are solar photons from? The hydrogen! According to conservation of mass, no matter can be created or destroyed, solar photons cannot come from nothing, the photons are from hydrogen, more specifically, their nucleons! This is a destructive way to prove photons are the origin for all particles! Of course, not all solar hydrogen will puff up becoming solar photons due to its enormous size with various physical conditions in the sun. nonetheless, this

sun’s business is sufficient to tell us that photons can be generated from its nucleons! The author can also present you a constructive way to prove photons are the origin for all particles!

2.1. Photon Challenge

All stimulus need to be translated into electric current for human brain comprehension. The vision is no exception. Here is an example for our seeing a yellow apple. For a ripened yellow apple, wavelengths of about 570 to 580 nanometers bounce back. These are the wavelengths of yellow light. When you look at a yellow apple, the wavelengths of reflected light determine what color you may see. The light waves reflect off from the yellow apple and hit the light-sensitive retina at the back of your eye.

There is an inherited barrier for us to manipulate photons down to a single level. If that single photon is not reflected away from experiment mediums, and hit in human eye, no one would see it. It is also highly unlikely for human eye detect one single photon because one single photon unlikely provokes light threshold and sparks electric current in human eye cells. For us to spot a light, not only we need our lens to increase concentration of photons, but also our eye has an impressive high light threshold, considering 6 to 7 million cones concentrated on a 0.3 millimeter spot on the retina. It requires certain quantity of photons to incite a reaction.

In addition, in a lab chamber with one photon or single proton, it demands absolute temperature of “near” zero! Otherwise, it is a contaminated lab chamber [10]. The author is afraid to say that such demanding is beyond human technology that will ever reach.

It is a formidable barrier for us to manipulate a single photon or single proton in an “absolute” void chamber, but it is not that hard for us to look into space and deduce that our particles are all from one single origin, that is photon!

2.2. Photon-bonding or Photosynthesis in Space

The object of biochemistry is part of universe which is subject to the same laws of physics. The author would be surprised if the objects of chemistry follow different laws of physics. Photosynthesis is a well know biological process where “uncoupled” photons are captured by plants. The word of “capture” is a very vague term that conceals a most remarkable “particle” process in physics. Apparently, the “uncoupled” photons must be bonded for new molecule “glucose” forming! Otherwise, the storming “un-coupled or un-bonded” solar photon will go thru or reflex from leaf without “captured”.

The photosynthesis apparently is not limited to solar photons! There are some types of fungi, called radiotrophic fungi, are able to use melanin as a photosynthetic pigment that enables them to capture gamma rays [13] and harness the energy for growth [14]. As author always believes, the nature is never penny pinching in providing us facts that help us to discover the laws of nature. The λ ray photosynthesis is extremely remarkable discovery for two reasons! 1. At the

early stage of earth, λ ray must be abundantly available; the organisms apparently are very adaptive that can utilize any types of photons. 2. λ ray photosynthesis is real.

The universe space is never a void place [4]. Here comes the cosmic microwave background (CMB) which is the thermal radiation left over from the "Big Bang". It is the oldest light in the current observed universe. Moreover, the microwave photons are un-coupled and exist as free flying ray! It serves one of forever emulsion agent in space! In a sense, any mass/matter possesses different character of physics will subject to segregation emulsion in a "CMB" soup!

Our current cosmos Gamma ray (not all of them) is from a big bang! It is partially supported by fact that the energies of gamma rays from astronomical sources range to over 10 TeV. That energy is far too large to result from radioactive decay [11]. some cosmos gamma ray are from pulsar and black hole though. However, gamma-ray pulsars and rare occurrence of gamma ray burst from black hole are very rare events in the universe. It is evidenced by recent observation: there have been only about one hundred gamma-ray pulsars identified out of about 1800 known pulsars [12]. Base on observation, the sources of most GRBs are billions of light years away from Earth, implying that the explosions are both extremely energetic (a typical burst releases as much energy in a few seconds as the Sun will in its entire 10-billion-year lifetime) and extremely rare (a few per galaxy per million years). Given the facts that the universe space is infinite big and it is full of diffuse gamma radiation, it can be reasoned that the pulsars and black holes are not sufficient source for such extensive universe background gamma radiation. Secondly, the radioactive decay is not a right candidate power house for cosmos γ -ray background either. The only option left here is a big bang. The big bang provides most of those cosmos γ -ray today. The remaining cosmos γ -ray is provided by big bang indirectly.

Apparently, the initial blast of gamma ray photons from a big bang will penetrate any mass that exist during a big bang explosion. For any gamma ray photons to be trapped or coupled at any sub-nuclear level, those storming photons need to be "slow down" first! Otherwise, the emulsion will not work with storming rays at speed of light! The missing link is how lights can be slow down. Now the puzzle is finally solved! At couple degrees above absolute temperature zero, the lights appear "slow down" significantly where ubiquitous emulsion stands for a chance to work! Our universe space background temperature is 2.7 Kelvin. It might go further down when our region of universe is ripe for next big bang, however our background temperature will never reach absolute temperature zero [4].

The universe is a complete and enclosed system, because there is nothing existing outside universe which may interferes universe matters/energy. The conservation of mass and energy perfectly apply universe as a unit. We can safely say that universe energy and mass are constant. $E_{\text{bigbang}} = E_k + E_p$

The E_k is the sum of kinetic energy presents in the current

universe. E_p is the sum of positional energy presents in the current universe. The big bang is a greatest event happened in the universe; it is an almost pure kinetic energy show. Soon after a big blast, some of its kinetic energy starts to transfer itself to the positional energy (γ ray nucleosynthesis/photosynthesis). Some γ ray photosynthesis trapped at subatomic stage and evolves into dark matter (significant positional energy, little kinetic energy). Some γ ray nucleosynthesis goes on to form galaxies and us. Some γ ray remains free standing status and becomes cosmos background ray [4]. The vast majority of λ ray fades into cosmic microwave background [16].

The light photons in a big bang blast provide building block for everything that possess positional energy include you and me. Apparently, light photons are not equal to proton or neutrons. But those particles are all originated from photons based on deductions of reasoning: 1. The big bang is the blast of high energy particles/ λ ray photons based on observation [4] 2. All Mass/Matters/neutrons are from high energy photons/big bang based on conservation law of mass.

2.3. Electrons and Friction

Electron apparently helps stabilize particle bonding and/or photon bonding.

As we all know, the emulsion requires initial energy input which is the big bang. As time passes, the big bang kinetic energy declines, the emulsion will revert to the stable state of the phases comprising the emulsions (e.g. the congregation of photons, the separation of neutrons and electrons in space). In dark matter, the initial segregation of electrons and neutrons actually destabilizes "newly formed" dark matter physics. Fortunately, such destabilization is counter-balanced by gravitation among emulsion agents when they grow into a substantial size! In a sense, all dark matter will have rich electrons around (gravity effects) which in turn help stabilize their infrastructure of neutrons [15] or bundled λ ray photons!

The halo of rich electric activities (e.g. x-ray), therefore, will be expected from any dark matter of substantial size! The destabilization occasionally affects neutrons which may unleash its bonding λ photons - excess λ photon activities!

The halo of dark matter (electron clouds) will be expected in space and experiment as well! Such halo is a norm for any black hole in space since black hole is made from dark matters! The halo and dark matter are kept together because of gravity effects between them! In addition, the halo (electron clouds) may also serve "friction factor" when multiple black hole merge. It is evidenced by recent discovery of a "lagging effect!" black hole in the merger of multiple black holes due to said frictions, where merging of first two black holes likely makes "halo" or electron clouds much thicker-creating greater friction for the third black hole to join! Those frictions eventually will be overcome by tremendous gravity among black hole!

In organic world, the photosynthesis is very common phenomenon, the uncoupled/unbounded photon hit chlorophyll and accessory pigments such as carotenoids and

phycobilins, chemical bonding “softening” happens, electron subsequently released, meanwhile, plant molecule potential energy curves become distorted. The photons apparently join the particles of receiving plant molecule. It is not only supported by energy curve distortion observed from experiment, but also evidenced by weight gaining/gravity gaining from growing plants which capture large quantity of photons through their growth. Other than certain wavelengths of solar photons are preferred by most plants, we also know radiotrophic fungi, which are able to use melanin as a photosynthetic pigment that enables them to capture gamma rays [13] and harness the energy for growth [14]. γ -ray is probably abundance in the early stage of earth while atmosphere has not developed. The organic lives must try every possible way to capture light photons to power their body!

In the space, the dark matter is stable mass rich in “coupled” or “settled” high energy particles/ λ photons, its stabilization factors/electrons must be rich as well.

The author reasonably expect more activities happen among electrons within or surround dark matters, which may strike and trigger X ray. The author’s view is supported by X-ray emission observed from center of galaxies [18]. On the other hand, fewer events gain enough power that “directly” disturb coupled λ photons, which may be unleashed and manifest as λ ray activities in dark matters.

The findings of λ ray burst or excessive λ ray photons in the black hole may indicate the transparency character of dark matter for λ ray or non-absorption of λ wavelength “uncoupled” photons! Which also indicates that dark matters “coupled” λ photons may reach its saturated level, leaving fewer rooms for “extra” λ photons bonding.

2.4. Dark Matter Experiment

In the space, the continuing of merging galaxies leave bigger and bigger space blobs with extremely low temperature which is a cycling process of preparing next big bang. Once a big bang occurs, the high energy particles of big bang most likely encounter many regions of extremely low temperature in space where dark matter start to form. The Lukin and Vuletic’s experiment solved a critical part of puzzle how “light speed” photons “slow down” affording emulsion process to do its job to transfer their kinetic energy to positional energy! The author has deduced dark matter is made from γ -ray photon-bonding or photosynthesis. Since γ -ray photosynthesis is not total alien to earthlings, we do have difficult time to understand how γ -ray photosynthesis occurs in the space. The author is very pleased to find out recent remarkable discovery called Rydberg blockade by coaxing photons into bonding together to form “molecules” – a state of matter by a group led by Harvard Professor of Physics Mikhail Lukin and MIT Professor of Physics Vladan Vuletic.

The big bang blast is most likely high energy particle e.g. λ ray photons, it is not electrons. In the immediate post bang “soup”, the “space emulsion” makes λ photons segregation possible in the soup of microwave inferred photons and

electron clouds. The initial space emulsion agents may not be structured as stable as the ones in later stage of universe evolution. The more stable structure develops when multiple nuclear decays happen in a little later stage of mass evolution!

The emulsion force that bundles “frozen” λ photons against microwave inferred photons and electrons is weak, therefore, nickname those little creatures as weakly interacting massive particles is deemed appropriate!

In the lab, Nuclear emulsion was first discovered by Marietta Blau and Hertha Wambacher In 1937. The author reasonably believes the dark matter can be formed in a lab setting where appropriate medium or photographic plate available as background/emulsion soup. The targeting photons must be λ ray photons! The temperature must mimic deep space temperature (2.7 kelvin or lower). The author also reasonably believes the electrons must exist in the medium for stabilizing newly formed dark matter in lab!

3. Methuselah Star HD 140283

The author applaud international collaboration for the Dark Energy Survey, if basic physics works for deep space, during big bang preparing stage, the map should demonstrate the “greater and greater” concentration of “matters or dark matters” as mass evolves or timing by humans, a phenomenon is similar to “oil water emulsion”. Meantime, we will see larger and larger space blobs forming with little mass and extremely low temperature inside. It is evidenced by newly discovered primordial blob which formed in prior circle of big bang preparing stage. Since the space is never void during or before any big bang, it will not be surprise to see some “older” celestial mass which is older than a current observed universe! It is supported by discovery of Methuselah star, HD 140283 which is “older” than our current universe! It is not paradox, it is another perfect evidence supports author’s universe model- one universe, endless cycles in a realm of gravity and emulsion [10]!

While universe expansion is accelerated, the frequency of merging galaxies/black hole may drop. The larger space blobs means greater distance to overcome for galaxies/black hole to meet. However, the size of galaxies/black hole will be significant larger than the ones at early stage of universe development! The larger size of galaxies/black hole make universe expanding acceleration possible due to increasing gravity power! The mature stage of galaxies may be significantly dimmer after large amounts of big bang photons (“visible” uncoupled ray) are bundled into positional energy to form galaxies mass (“coupled” photons), though.

3.1. Emulsion and Gravitation Revision

The emulsion plays a key role for universe galaxies formation and nucleon formation. The gravity power is much more significant comparing to emulsion power, especially in late stage of universe development, when larger and larger galaxies/black holes formed! The emulsion force sometimes

work along with gravitation power, sometimes it will work against gravitation power. The emulsion power maybe Negligible when Newton calculated the apple velocity with gravity in his garden. Apparently, the apple is subject to emulsion force as well; because the physics character of apple is differ from air. However, it is negligible because the emulsion force is trivial!

The story might not be true, when we look at a star/planet with trillion and trillion size/mass of Newton's apple, the emulsion force between a gigantic star against cosmic background photons may not be trivial! The modified gravitation may become necessary. Same rule may also apply for calculating orbiting status of a gigantic celestial mass!

The universe is never a place of completely "void". It is filled up with matters of two kinds – "uncoupled" and "coupled" mass at different concentration in space. The "uncoupled" mass e.g. cosmic ray corresponding to mostly "kinetic energy" and electrons; the "coupled" mass corresponding to mostly "positional energy", those "coupled" and "uncoupled" mass serve distinguish different nature of mediums where "emulsion" comes to play. Therefore, the gathering of bigger and bigger mass is driven by two forces! – the gravity and emulsion. The author believe emulsion is most likely playing a bigger role for dark matter forming! rather than a result of simple collision of photons!

3.2. Matter, Anti-Matter, Space-time, Gravitational Wave

The author has always felt that basic physics has provided us remarkable understanding of mechanics behind everything on earth. To abandon them, the author thinks that we need a good reason. We all love our academic freedom, but we are dedicated to seek truth as scientists and open for scientific scrutiny or debate!

It was 1756, Mikhail Lomonosov discovered the law of mass conservation by experiments, and came to the conclusion that phlogiston theory is incorrect. The concept of mass conservation is widely used in many fields (limited in scientific aspect of human life, of course) such as chemistry, mechanics, and fluid dynamics. However, the confusion of mass law persists deep into modern time! As author described earlier, when uncoupled/visible photons become bonded/coupled, "visible" photons will disappear in front of our eyes, but it doesn't mean they are vanished! The perception of "canceling" effects among matter and anti-matter implies "vanish". Such perception may validate a magician's dream work or trigger a mass worship, but it serves an intellectual black hole in physics.

Any particles that are coupled /congregated will manifest gravitational effects [4]. The simple example is an apple, thru photosynthesis; the big apple that contains large quantities of coupled photons along with new electrons may manifest gravitation effects! The solar light can be, therefore, considered as gravitational wave. However, the gravitational

wave is misleading concept because it implies that there are non-gravitational wave/particles exist. As I described earlier, all particles include electrons and photons can manifest gravitation of significance! if they are coupled/congregated! There are no such things eligible for non-gravitational wave!

Space is just void where matter floats, and time is a history record of progress of matter evolution. The Space-time is not matter; it can never be "rubbed" or "rippled"!

Emulsion is a well-studied natural phenomenon in basic physics. The common sense of earthlings, however, tells the author that the space emulsion force may modify gravity force in space or anywhere, where stars, planets, black holes and /or particles are exposed to "non-similar" matter in a non-void space -emulsion soup!

The earth is part of universe! The law of physics works for earth; it will work for the rest of universe! And vice versa! The author is afraid to see that great thoughts of "icon of genius" might munch away many generations of bright mind (limited in science, of course!).

3.3. Nucleosynthesis, WIMPs, Radiation

The big bang Nucleosynthesis starts with merging /coupling of big blast high energy particles/photons in the soup of electrons and Cosmic Microwave background(initial big blast kinetic energy along with emulsion force)→protons and neutrons/primordial nucleons formation (some big blast kinetic energy transfer to positional or orbiting energy also known as gravity) → the "initial" or unstable nucleus decay/radioactive decay → dark matter formation/stabilization + λ ray bursts → mass gathering due to dark matter gravity → visible galaxy formation.

The dark matter may go thru "initial formation" then "stabilization" with radioactive decay process:

$\bar{\nu}_e + p \rightarrow n + e^+$ (Cowan-Reines neutrino experiment) dictates beta negative decay reacted with protons to produce neutrons! and positrons which quickly combine with electrons, releasing gamma rays [17]!

The author agrees with the increasing consensus among scientific community: Dark Matter is mass of neutrons with electron cloud that stabilize neutrons. The stable dark matter/black hole has signature "x" ray or " λ " photon excess. The initial "unstable" dark matter/black hole may have phenomenal λ ray burst! The λ ray burst, however, has dramatically reduced when universe progress to a more stable stage! So is the rate of galaxies/dark matter merge (decreasing), while size of galaxies/dark matters, however, are increasingly becoming gigantic when space emulsion force and gravity power continue to drive our current galaxies' merge.

The emulsion force that bundles λ photons against microwave inferred photons and electrons is weak, therefore, nickname those little creatures as weakly interacting massive particles is deemed appropriate.

4. Space Laboratory Exploration and Computer Simulation

There are two ways to learn flying. The airplane flight simulator or a real plane will all serve its purpose. Once we understand the makeup of all mass and the circle of universe, we will be able to quantify the possibilities by using computer to simulate the foreign stars/planets/galaxies/big bangs and so on. We can use computer to simulate all possibilities of organic matter evolution in different environment/planets. Instead of reaching out to visit aliens, we can create aliens in our big screen and watch them from our living room, a favorite way for travelling to many "home-bounded" tourists in today's world!

Our lab, however, should be able to create miniature version of pre-big bang dark matter mass, big bang, dark matter formation, galaxy formation etc.

5. Results Analysis

The emulsion is ubiquitously phenomenon, the mass love to segregate based on its inherited similarity. Since everything is made from atoms/nucleus/electrons, it is not surprised to know that those little creatures share same flavor as their bigger brothers e.g. oil and water. In a lab, Nuclear emulsions have been well studied and used to investigate fast charged particles like nucleons or mesons. Follow the same foot step, the author further reason that the emulsions also exist for sub-nucleon particle, more specifically, photons! The photons distinguish themselves with various wave length and frequency. The similar wave length/frequency photons may very well segregate in the emulsion broth of electron or photons with different wave length/frequencies!

The particle emulsions are only inches away from nuclear emulsions! Once we master particle emulsions, we will be able to produce dark matter in our lab! The practical application of making dark matter is enormous! Not only it will help us understand the origin of all particles, the origin of universe, but also it will re-shape our medicine, energy industry and military operation!

The universe is a complete and enclosed system, because there is nothing existing outside universe which may interferes universe matters/energy. The conservation of mass and energy perfectly apply un/iverse as a unit. We can safely say that universe energy and mass are constant. $E_{\text{bigbang}} = E_k + E_p$

The E_k is the sum of kinetic energy presents in the current universe. E_p is the sum of positional energy presents in the current universe. The big bang is a greatest event happened in the universe; it is an almost pure kinetic energy show. Soon after a big blast, some of its kinetic energy starts to transfer itself to the positional energy (γ ray nucleosynthesis/ photosynthesis). It serves a practical basis for our reasoning that all particles are from same origin- photons! It is this reason, therefore, the author recommend use photons as emulsion agent in particle emulsion/dark matter experiment!

6. Discussion

The mechanic of manufacturing all neutrons from photons is "emulsion"! The un-coupled photons/ray do not have gravitation effect, therefore, gravitation does not play a role in initial photon bonding! Once photon bonding occurs thru emulsion segregation, the gravity effects appear, bonding/ coupled photons, therefore, attract electrons around which will further stabilize photon bonding! The striking of a new photon on binding photons will destabilize the harmony between stabilized coupled photons and their mates-electrons. The electrons will be excited and jump, which further destabilize "coupled photon" until one photon will be unleashed from its bonding and fly out as a single ray/photon [17]!

The traditional way of dissect particles may encounter forbidding technical difficulty by isolating single photon or proton for experiment. The recent discovery of photon bonding phenomenon in inorganic lab afford a possibility for making "photon emulsion" in human lab, furthermore, "producing our own dark matter" will be within our reach with this approach! We may see a "zoo" of particles, but they are most likely originated from photons based on universe observation in author's universe model.

Once we understand the fundamental makeup of all mass and the circle of universe; we can be "100%" confident to pin down all particles to single source-photons! We shall be able to quantify the possibilities by using computer to simulate the foreign stars/planets/galaxies/big bangs and so on. We can use computer to simulate all possibilities of organic matter evolution in different/exotic environment/planets.

The author promotes computer space exploration along with physical exploration in deep space.

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