

Solving the Olbers's Paradox, Explaining the "Red-Shift", and Challenging the Relativities by "Sun Matters Theory" and "Sun Model of Universe", an Evolution of the Einstein's Static Universe Model

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ABSTRACT

Olbers's paradox, known as the dark night paradox, is an argument in astrophysics that the darkness of the night sky conflicts with the assumption of an infinite and eternal static universe. Big-Bang theory was used to partially explain this paradox, while introducing new problems. Hereby, we propose a better theory, named Sun Matters Theory, to explain this paradox. Moreover, this unique theory supports and extended the Einstein's static universe model proposed by Albert Einstein in 1917. Further, we proposed our new universe model, "Sun Model of Universe". Based on the new model and novel theory, we generated innovative field equation by upgrading Einstein's Field Equation through adding back the cosmological constant, introducing a new variable and modifying the gravitationally-related concepts. According to the Sun Model of Universe, the dark matter and dark energy comprise the so-called "Sun Matters". The observed phenomenon like the red shift is explained as due to the interaction of ordinary light with Sun Matters leading to its energy and frequency decrease. In Sun Model, our big universe consists of many universes with ordinary matter at the core mixed and surrounded with the Sun Matters. In those universes, the laws of physics may be completely or partially different from that of our ordinary universe with parallel civilizations. The darkness of night can be easily explained as resulting from the interaction of light with the Sun Matters leading to the sharp decrease in the light intensity. Sun Matters also scatter the light from a star, which makes it shining as observed by Hubble. Further, there is a kind of Sun Matters named "Sun Waters", surrounding every stars. When lights pass by the sun, the Sun Waters deflect the lights to bend the light path. According to the Sun Model, it is the light bent not the space bent that was proposed in the theory of relativities.

1. INTRODUCTION

Olbers's Paradox [1] states that, in the hypothetical case that the universe is static, homogeneous at a large scale, and populated by an infinite number of stars, any line of sight from Earth must end at the surface of a star and hence the night sky should be completely illuminated and very bright. This contradicts the observed darkness and non-uniformity of the night.

The first part of this paradox assumes that there are no objects between stars and earth; in another word, the space is empty. This is the dominant viewpoints of most modern physicists even after the dark matter theory is proposed. However, it is not deemed as true by many ancient scientists. For example, Thales of Miletus thought there are "waters" outside around earth. Such "waters" could be an invisible mass which has not been revealed because of the limitations of modern instrumentation.

According to current dark matter theory, the universe is mostly composed by dark matter. In the standard Lambda-CDM model of cosmology [2], the mass-energy content of the universe is 5% ordinary matter, 26.8% dark matter, and 68.2% a form of energy known as dark energy. If the dark energy does not count as matter, this is $26.8/(5 + 26.8) = 0.843$, near 85% of the universe. If considering the energy, the dark energy and dark matter constitute 95% of the total mass-energy content of the universe. In another word, researches only studied a very small portion of the universe with a tunnel view. It used to be said that cosmologists are "often in error but never in doubt."

To date, there are two general opinions about the universe: static universe or expanding universe. The static universe is first proposed by Thomas Digges in 16th century [3], who thought the universe is eternal; in 20th century, Einstein proposed a new static model [4]. In Einstein's Static Universe Model, a universe has the spatial curvature; in Digges's Eternal Universe Model, a universe does not have the so-called spatial curvature. Both thought the time is infinite; but Einstein thought the space is finite. The expanding universe is speculated by the Big-Bang theory [5], which was initially proposed by a priest [6] who thought the universe is expanding from an initial state. According to the Big-Bang model, the universe comes from the exploring of a fireball around 13.7 billion years ago [7]. It cannot explain where the fireball came from and what was happening before 13.7 billion years ago. The 13.7 billion years is thought as the life of the universe because the farthest star that a telescope can observe is 13.7 billion light years. According to Big-Bang, since the universe is expanding, the distance from earth to the farthest star should be corrected to 28 billion light years, which is the edge of our universe; it did not explain what is beyond this boundary.

Einstein initially did not agree with the Big-Bang and proposed the Einstein's static universe model. Later on, the scientist, Edwin Powell Hubble, found the "redshift" of stars [8]. In physics, a redshift is an increase in the wavelength of electromagnetic radiation (such as light). Hubble observed that the redshift of galaxies was directly proportional to the distance of the galaxy from earth. This phenomenon is called "redshift", also spelled as "red-shift" in astrophysics. None of static universe models could explain the observation of "red-shift". On the other hand, the "red-shift" is simply deemed as the elongation of wavelength due to the expanding of our universe, according to the Big-Bang theory. Thus, Big-Bang became the overwhelming theory at his time. Finally Einstein had to remove the cosmological constant from his equations to fit the Big-Bang theory, abandoning his static model of universe. It is worthy of mentioning that such explanation of "red-shift" by the Big-Bang theory is not perfect, because the light energy is reduced when their wavelength became longer according to the equation of $E = hc/\lambda$ and the Big-Bang cannot explain where the lost energy goes. The parameters in this function will be discussed in below texts. Briefly speaking, in the Big-Bang model, the energy is lost for nothing; this disobeys the "law of conservation of energy [9]", even after considering the mass-energy equivalence.

Given the fact that the most of the contents of the universe is in the form of dark matter and dark energy, a model and theory is required to better explain many issues in the field of cosmology, including the above-mentioned Olbers's Paradox. Hereby, we proposed a new model that is partially based on the previous static universe models while adding back the Einstein's cosmological constant. However, our model gives new explanations on many phenomena, and provides extremely different views on many important issues in the field of cosmology, such as the well-known gravitational lens (space bent) according

to Einstein's theory of relativities.

2. SUN MODEL OF UNIVERSE AND SUN MATTERS THEORY

Currently, most hypotheses and researches on dark mass are based on human's observation and imagination on general physical properties of ordinary matters. For example, all contemporary equipment are basically an extensions of how human beings feel the world, by vision, hearing, smell, taste and touching. This is why we cannot detect the dark matter directly, even though they are there. With Big-Bang theory becomes popular, it is easier to follow the mainstream of science opinions in order to get publications and promotions. Nowadays cosmologists changed their attitudes to "often in doubt but never in errors." Such an attitude creates boundaries for novel research. To break the boundaries and overcome those limits, we proposed a new theory, the Sun Matters Theory that states:

- Dark Mass is not dark. It should not be ignored. Instead, it constitutes the main part of the universe and should be treated as important as the sun. It will be illuminate through the advance of science.
- Hereby we named all matters other than ordinary matters as the Sun Matters, which includes all dark mass as well as dark energy that can be converted to mass according to the Einstein's mass-energy equivalence function:

$$E = MC^2 \quad M = C^2/E$$

where the M is the mass, E refers to energy and C is the speed of light which is deemed as constant. Since mass and energy are convertible, 95% matters in the universe are Sun Matters while considering the above-mentioned standard Lambda-CDM model of cosmology.

- There are different types of Sun Matters, so we will use plural not singular form when referring to Sun Matters. Sun Matters are anywhere in the universe, in both the space and human body. Different types of Sun Matters have different properties. They could be mixed and coexists.

- Sun Matters are true beings out of the detection limits of modern sciences. They constitute the major part of universe (95%, [Figure 1](#)). According to the Einstein's mass-energy function, if all the Sun Matters are transformed into energy, the energy will be enormously huge than the energy of any visible star. The name of "Sun Matters" reminds people to deem the Sun Matters as important as the Sun.

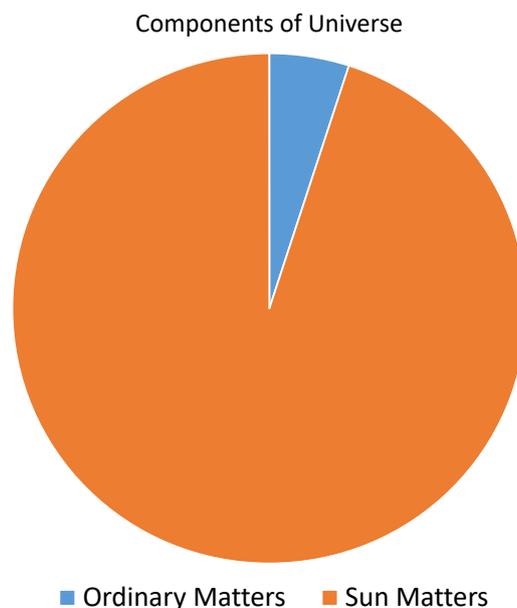


Figure 1. The Sun Matters constitute the major part of universe (95%).

- The Sun Matters Theory matches with many ancient theories that are from higher civilizations which could be traced to the time of Atlantis. For example, Ether is like a Sun Matter. Luminiferous aether (ether) was thought to fill the universe by Greek philosophers. Hereby, we proposed that ether-like Sun Matters interact with light at a scale far beyond the ultra-nano scale (e.g. one in a trillion). In such a tiny scale, all modern instruments will be too “short-vision” to visible such interactions. When light travels though the infinite universe, such interactive effect can be magnified by a scale of more than trillions (even septillion scales); thus, the add-up effects will be huge enough to demolish lights, and give human a dark night.

- There are many types of Sun Matters. There are more condensed types of Sun Matters around each objects which will be discussed in later part of this article. For another example, Chi is a type of Sun Matters. Though it is invisible, it fills human body and can be felt by well-trained yoga practitioners. In this article, we focus on those in astrophysics and will discuss multiple types of Sun Matters in separate articles.

- The ordinary matters and Sun Matters are convertible. For example, black holes can turn stars into Sun Matters and can also generate galaxies from Sun Matters.

Based on the Sun Matters Theory, Digges’s Eternal Universe Model and Einstein’s Static Universe Model, we proposed a new model of universe, named as the Sun Model of Universe. It states that we are living in a static universe filled with both Sun Matters and ordinary matters. These two kinds of matters are convertible and there are different subtypes for each of these two matters. All these subtypes can coexist and even interact with each other. Such interaction can be very tiny, and can be obvious. If the interaction is very tiny, it can be magnified through the huge scale of universe. Different from Digges’ and Einstein’s model which only know the ordinary matters and assume that (ordinary) matters are uniformly distribute in the universe, the Sun Model of Universe recognizes that the matters in universe do not have to be evenly distributed; there could be countless similar situations and countless different situations, where different parts of universes have different components and distributions of different matters (Figure 2).

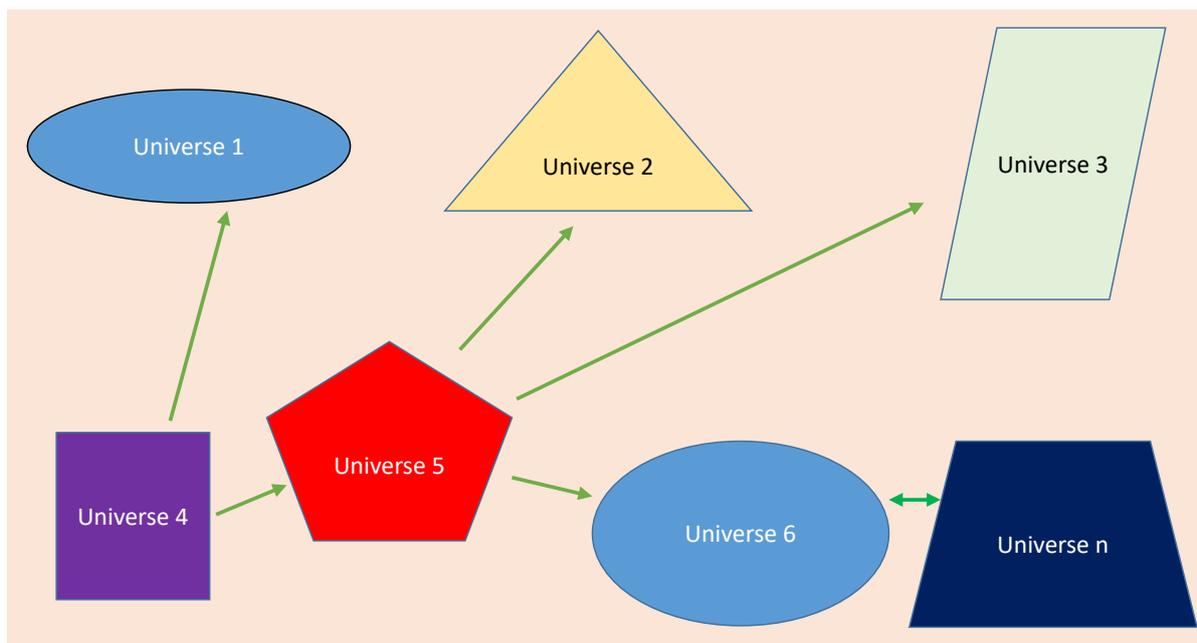


Figure 2. According to Sun Model of Universe, the Big Universe contains smaller universes, which could have different shapes, not limited to something with spatial curvatures. In term of sizes, components, shapes and rules, those small universes could be same or could be different. Some universes have the speed limit like ours, which is the light speed, while others does not. There are numerous numbers of small universes and there could be parallel civilizations in each small universe, which could be connected.

In Einstein's Static Universe Model, Albert Einstein proposed a temporally infinite but spatially finite static eternal universe. In our Sun Model of Universe, we agreed that the universe is a temporally infinite static eternal universe, but spatially the universe could be finite or infinite pending on how you define the concept of a universe. It can be spatially finite, with condensed Sun Matters forming a boundary wall, which enclosed our universe. This could be another explanation that even the best telescope cannot see any stars beyond 28 billion light-years. From this point of view, our universe is finite. If so, what is something that beyond our universe? Beyond the boundary wall of Sun Matters, it could be other counterpart universes. If we define all existing things as a Big Universe, then the Big Universe is infinite. In contrast to the Big Universe, we called the individual universes enclosed within their Sun-Matters walls as the Small Universes.

In Einstein's Static Universe Model, a universe has the spatial curvature; in Digges's Eternal Universe Model, a universe does not have the so-called spatial curvature. In our Sun Model of Universe, we recognize both possibility because we think the Big Universe contains smaller universes, which could have different shapes, not limited to something with spatial curvatures. Our universe is just one of small universes. There are parallel universes other than ours. Some of them could have orders and rules which are beyond the current human's understandings.

In our universe, we have a limit for all ordinary matters: the light speed. Nothing, which has been discovered so far, is faster than the light. Sun Matters is different from ordinary matters. There is a possibility that the speed limit can be higher. Thus, we use L to represent the speed limit in our universe. In the Sun Model of Universe, it is possible to travel in a speed faster than the light. In another word, space travel is possible and realistic. Traveling throughout the universe and having tourisms on many galaxies will be achieved with the advance of science. Further, we upgrade the Einstein's mass-energy equivalence function to the Sun's mass-energy equivalence function as below.

$$E = ML^2 \quad M = L^2/E$$

In the Sun's equivalence function, L could be higher than the light speed. When the L is higher than the speed of light, there will be special type(s) of Sun Matters can produce huge energy with a tiny little mass. With the advance of human civilization, it is just a matter of time for human to find new energy sources with higher efficiency than current nuclear plant.

3. INTERPRETATION OF KNOWN ISSUES BASED ON THE NEW THEORY AND MODEL

Our proposed Sun Model of Universe and Sun Matters Theory can perfectly explain the root causes of many abnormal observations, paradoxes and historically-argued issues. They provide insightful interpretation on Olbers's Paradox (Figure 3), the redshift observation, the gravitational lens (bended space), the field equation as well as many popular puzzles.

3.1. Olbers's Paradox

The Olbers's Paradox is solved by the Sun Matters theory. According to our new theory, there are Sun Matters in the universe. One of them is like ether, which filled the universe, just as the air filled the space inside the earth. It interacts with light at a very tiny scale, far below the detection limit of modern instrument in a general laboratory. When the light travels though millions/billions of light years of distances, such interactions can be magnified by a scale of more than trillions. Therefore, the add-up effects will be very effective: the light between the earth and the star will be diminished when traveling for millions of light-year distance as illustrated in Figure 3.

Assuming the average light intensity of our sun is 1 and it will diminish a nano (10^{-9}) when traveling for every million kilometers. Thus, it will be diminished in $1/(10^{-9}/10^6) = 10^{15}$ km. One light year is equal to 9,460,700,000,000 km, round to 10^{13} km. So its light will be diminished when traveling for $10^{15}/10^{13} = 100$ light years. If a star is a bright star that is 1,000,000 times brighter than our sun, its light will be diminished in $1,000,000 \times 100 = 100,000,000$ light years. This is in line with the observation that there is no

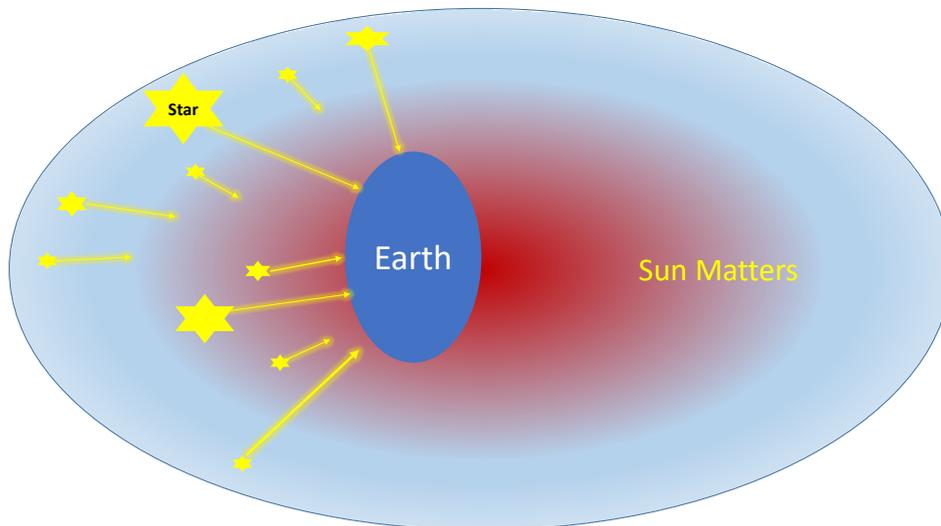


Figure 3. Night is dark because Sun Matters serve as an object to diminish the effects of lights. They fill the universe, with the thickness in the light-year scale. In this scale, even slight interactions can be accumulated into an apparent effect. Most lights are diminished before reaching earth. Moreover, there are could be more than one type of Sun Matters between earth and those stars; their distributions are not necessary to be even. Thus, the night we observed should be dark with non-uniformity.

bright star (stars with 1 million solar luminosity or greater) found in the distance far more than 100 million light years. Thus, the real brightness of a star is more than the brightness that scientists can observe from the earth or from the outer space around earth even using the best telescope. The real brightness should be calculated using the function:

$$B_r = B_o + f(d, D)$$

where B_r is the real brightness, which is equal to B_o (observed brightness in the outer space around earth) plus a value that is determined by the d (distance) and D , which is a new variable that we introduced, named as the diminishing factor (D) that could be different pending on the types of matters. In the above calculation, we assume that the light will diminish a nano (10^{-9}) when traveling for every million kilometers. The actual diminishing speed is depending on the diminishing factor of the subtype(s) of the Sun Matters that the light pass through.

Thus, Sun Matters serve as a filter lens to diminish the effects of lights, like a lens filter, with the thickness in the light-year scale. The nearest star from earth is 4.2 light-years (Proxima Centauri, 40,208,000,000,000 km away). The farthest star is 28 billion light-years (Earendel, 2.649×10^{23} km away). In huge light-year scales, even slight interactions can be accumulated into a big effect. Moreover, there could be more than one type of Sun Matters between earth and those stars; their distributions could be uneven. Thus, the night we observed should show darkness and non-uniformity.

3.2. Redshift, Einstein's Nightmare

Our Sun Matters Theory will be an innovative ground-breaking theory in 21st century. It perfectly explained the "redshift", a key concept for astronomers. A redshift is an increase in the wavelength, and corresponding decrease in the frequency and photon energy, of the light. It is observed that the far a star is from earth, there are more shifts of the lights to the longer wavelengths with lower energy of the photon.

In 1929, Hubble announced his observation that the red shift of galaxies was directly proportional to the distance of the galaxy from earth. According to the Big-Bang theory, the “redshift” is understood literally—the wavelength of the light is stretched, so the light wavelength becomes longer; this looks like the light is “shifted” towards the red part of the spectrum. This theory cannot flawlessly explain the energy loss of photon.

Einstein initially did not agree with the Big-Bang and proposed the Einstein’s static universe model. However, after Hubble’s observation of “redshift”, Big-Bang theory became the overwhelming theory at his time. Einstein’s relativity theory was criticized not only by scientists but also by racists as part of Jewish antisemitic objections [10]. Einstein had to abandon this static universe theory due to peer pressure; otherwise, he had low chance to get cordial invitations from peer scientists with decent oversea job packages and warm-hearted help on his refugee status in order to leave the Nazi German. Faced with pressures, Einstein removed the cosmological constant from his equations [11]. Nowadays, scientists get to know the dark matters; further, we proposed the Sun Matters Theory. According to our theory, Sun Matters interact with lights in the huge cosmological scale. It is in line with the observation that the farther a star is from earth, the more “redshift” of its lights is observed. The farther a star is from earth, there will be more Sun Matters that reduce the energy of its lights. Consequently, the photon’s frequency will be reduced according to the well-known Photoelectric Effect function:

$$E = hf \quad f = E/h$$

where h is the Planck’s constant. Frequency (f) will decrease when the energy (E) decreases. When the frequency decrease, the wavelength of a photon will increase according to the function of Electromagnetic Wave Relationship:

$$C = \lambda f \quad \lambda = C/f$$

where the wavelength (λ) of an electromagnetic wave increases as a result of the frequency (f) decreases, due to the energy decrease, which is caused by its interaction with Sun Matters. This causes the “redshift”. The more distance a photon travels, the more interaction with Sun Matters, the more “redshift” can be observed. This explained the Hubble’s observation while matching a Static Universe Model like the one that Einstein proposed (Figure 4).

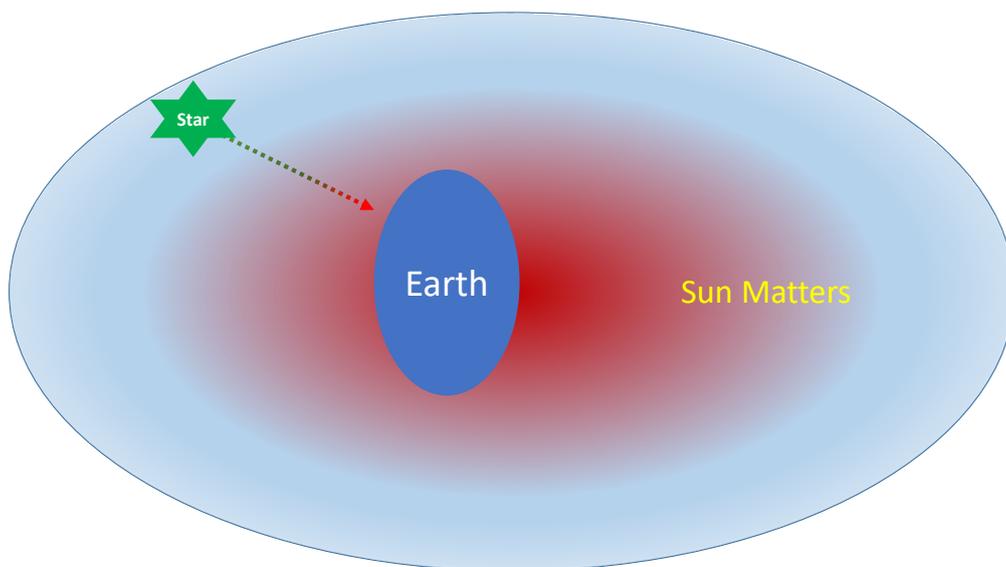


Figure 4. Sun Matters decrease the energy of photons and caused the redshift. The more distance a light travels in order to reach the earth, the more Sun Matters they will encounter, and consequently the more redshift will be observed.

It is noteworthy that our explanation on “redshift” is in line with the observations that many “bright” star can only be discovered by the infrared telescope. For example, V4650 Sagittarii is a star that is 8 million (7,943,000 solar luminosity) times brighter than our sun; however, it is not recognized until 1990s by infrared. It is 25,000 light years away. A typical human eye will respond to wavelengths from about 380 to about 750 nanometers; the medium is 565. The infrared zone starts from 750 nm. If V4650 Sagittarii is a normal sun with similar electromagnetic spectrum like our sun, according to the equation of $E = hc/\lambda$, a photon with a medium wavelength in visible zone will become a photon of infrared by losing $(hc/565 - hc/750)/(hc/565) = 25\%$, a quarter of its energy. The Big-Bang theory cannot faithfully explain how the energy lost and where the lost energy goes. According to Big-Bang Model, the energy is lost for nothing; this disobeys the “law of conservation of energy”, even after considering the equivalence between mass and energy. Alternatively, the Sun Model is more reasonable and more straightforward to explain such phenomena than the Big-Bang. According to our Sun Matters Theory and Sun Model, the energy is lost during the interaction/frictions with the Sun Matters, and their energy is transferred to Sun Matters or become other ordinary matters like heat during frictions. This also explained the source of Cosmic Microwave Background (CMB), which is found as a persistent radiation from the universe with a thermodynamic temperature. Nonetheless, we do not call CMB as the “Relic Radiation”, which was named according to Big-Bang model that speculates the radiation comes from a fireball around 13.7 billion years ago [6]. It cannot explain where the fireball came from and what was happening before 13.7 billion years ago. In fact, the Big-Bang theory cannot flawlessly explain why it is observed that CMB is neither smooth nor uniform. On the other hand, this “abnormal” observation can be perfectly explained by the Sun Model: the radiation should not be smooth or uniform because there are different types, even subtypes, of Sun Matters.

3.3. Light Bent or Space Bent

Thales of Miletus thought there are “waters” outside around earth. In many ancient civilizations, the earth was thought to be surrounded by ocean waters. Such “waters” could be a kind of invisible matters which have not been revealed because of the limitations of modern equipment. We evolved this theory as: “water-like” Sun Matters outside every objects including Stars (sun) and Planets. We called this kind of Sun Matters as the Sun Waters, which are surrounding not only the earth but also all planets and stars, and are more condensed than general ether-like Sun Matters. They are condensed enough to cause the light to be deflected in a direction different than original. Here we use the plural form because there could be different forms of Sun Waters. This seamlessly explains the phenomenon of gravitational lens. In Sun Model of Universe, when light travels nearby the sun, its path will bended because of the deflection of light by Sun Matters, especially the Sun Waters. This effect is first observed on 1900s. Our theory is the easiest way to explain the effect: the light is bent because of the deflection by Sun Waters. In 1930s, Einstein proposed the light is not bent; instead, the space is bent according to his general relativity theory. This phenomenon was called gravitational lens. Both our Sun Water hypothesis and Einstein’s relativity theory can give explanations, but our interpretations is more straightforward. Further, both theory can predicate that there are the gravitational-lens effects when light pass through a galaxy, which have been testified by many observations.

It is noteworthy that the Sun Waters hypothesis and the Sun Matters Theory are also challenging many traditional interpretations of interesting observations. Back to a time when there are less light pollution on the night sky, people used to see the star shining in clear night. The shinning was believed to be caused by interfere of light with atmosphere. Based on the Sun Matters Theory, it could also be caused by interfering of light with Sun Matters. How about a telescope locates in the outer space like Hubble Space Telescope? Yes, it does observe the similar phenomenon. Its pictures show that the light from a star spread over a wide area instead of being concentrated on a few pixels (**Figure 5**). Since astronomers cannot explain this phenomenon, so they treat it as a technical error. Our explanation: the star lights have interference with the Sun Waters surrounding the star, which scatters the light and make it shinning. There could be more such interactions when the lights enter the milk-way galaxy, and enter the field of Sun Matters in

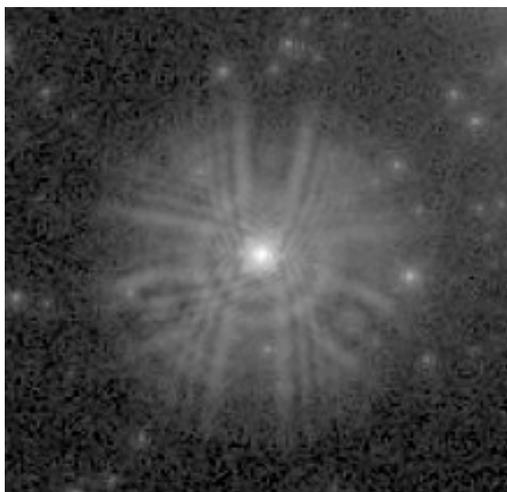


Figure 5. Sun Matters scatters the lights from a star and make the star shining as observed by Hubble Space Telescope. This phenomena cannot be explained in current science framework.

our solar system and the Sun Waters surrounding the earth. When you take a good resolution picture either at outer space or inside the earth, it could show that the light from a star spread over a wide area instead of being concentrated on a few pixels, as observed by Hubble Space Telescope.

Further, with the progress of science, we will be able to figure out whether the space is bent or the light bent. Hereby, we speculate a way to prove that our theory is better. Assuming there are two similar-size stars, one has more condensed Sun Waters and less condensed mass comparing with the other. According to Einstein's Relative Theory, the star with more mass will have stronger gravitational lens effect than the other; while according to Sun Matters Theory, the star with more condensed Sun Waters will have stronger gravitational lens effect. Although we cannot directly detect the Sun Waters, we can see the deviation from Relative Theory: the star with less mass will have stronger "gravitational" lens effect, which will be contradictory to the Relative Theory. This kind of observations will support our Sun Matters Theory.

3.4. Either—A Medium Filling the Universe

To help audiences to understand the new concepts of Sun Matters, we borrow the word "either", which was deemed as a medium filling the vacuum by scientists and philosophers from Axial Age to Quantum Age. In Sun Model of Universe, we deemed either as one of Sun Matters that fill the universe. This proposal fits into its original meaning: a matter that fills the space.

It is noteworthy to mention that the Michelson-Morley experiment (performed in 1880s) did not find obvious interactions between light and either in a lab, because the limitation the experiment itself. Using their small devise in a general lab room, they compared lights from different directions and found there is no detectable differences on light direction and speed. It is like to use a small ruler to measure the light-year distances. The experiments should not be designed in such a way. Back to 1880s, it has limited instrumentation. Its technical errors render the direction limits far beyond the scale of the tiny interaction between ether and light. Moreover, statistics errors are pointed out by re-analyzing the original data [12]. Unfortunately, after Michelson-Morley experiment, the either is ignored for a hundred years, until the recent Nobel Award for the discovery of dark matter. When assuming the universe is empty like a vacuum, many important observations are ignored.

3.5. Discussions

In addition to aforementioned Olbers's paradox, redshift observation and the concept of either, the Sun Matters Theory also explains many abnormal observations and paradoxes. For examples:

- If our universe is limited, what will be existed out the boundary of our universe?

According to Sun Model, there are more condensed Sun Matters forming a boundary wall, which enclosed our universe. That helps uncover the cause that even the best telescope cannot see any things beyond 30 billion light-years. Beyond the wall, it could be other parallel universe. In the Sun Model, we deem our current universe as a small universe, a unit forming a big universe which is infinite.

- If the universe is unlimited, why can we not see more stars farther than 28 billion light-year even using the best telescope?

Currently, scientists believe the farthest that we can see is the star of Earendel, which is 28 billion light-years away. According to the Sun Matters Theory and Sun Model of Universe, there are two reasons that we cannot see farther than that: 1) there are boundaries made by Sun Matters in our unit of the small universe and such boundaries are walls that block most lights from other units of the nearby small universes (Figure 2); the star of Earendel might be near the edge of our small universe; 2) the Sun Matters have more interactions with lights with the increase of distance in cosmological scales. In another word, light sent by stars that are more than 28 billion light-years away will be filtered out and is below the detection limit of any modern instruments. It is noteworthy that the maximal distance a telescope can actually observe is 12.9 billion light-years (the star of Earendel). The 28 billion is calculated based on the Big-Bang theory assumption, which is not necessary to be true. Also, if the light speed is reduced when travelling through some types of Sun Matters especially the aforementioned Sun Waters, the farthest star that a telescope can observe could be less than 12.9 billion light-years away.

- How big is the proposed Big Universe?

It is bigger than a small universe. It could be infinite, or it could be a quantum of a larger universe which is infinite.

- Einstein's Static Universe Model will be collapse or expand forever without the cosmological constant; however, Einstein removed the constant from the field equation after the observation of "redshift" and abandoned this model as mentioned above. What should the field equation be according to the new theory?

The Einstein's Static Universe Model can be extended by introducing the concept of Sun Matters, which are different from ordinary matters. Thus, we added the cosmological constant back to the Einstein's field equation with modification on the gravitational constant. We named as the Sun Equation:

$$R_{uv} - \frac{1}{2}Rg_{uv} + \Lambda g_{uv} = sT_{uv}$$

In this equation, we introduced the gravitational variable written as s (Sun Variable), which is different than Einstein gravitational constant (k) that is calculated by the Newtonian constant of gravitation and the speed of light in vacuum. The gravitational variable (s) cannot be simply calculated based on other constants for ordinary matters. Instead, it depends on the types of matters (Sun Matters or ordinary matters), the subtypes of Sun Matters, and the compositions.

4. CONCLUSIONS

The Sun Model of Universe is an innovative model and the Sun Matters Theory will be a groundbreaking theory in this emerging Space Age while human beings try to "conquer" the universe. To some extents, our proposed model and theory are more close to the reality than many traditional models, such as the Big-Bang Model, Einstein's Static Universe Model, and Digges's Eternal Universe Model.

First of all, we proposed the Sun Matters Theory. According to this theory, we called all matters except ordinary matters as Sun Matters, composed the majority of the universe. The Sun Matters interacts with light to diminish the energy of photo in a very tiny slight way, which is too tiny to be detected by a

general experiment; however, it does have effects in large distance scale, such as millions/billions of light years. The new theory provides better or alternative explanations about many unusual observations and paradoxes. The Einstein's Static Universe Model is supported by the Sun Matters theory. We further upgraded the Einstein's Field Equation, by putting back the ignored cosmological constant and replacing the gravitational constant with a new variable. In the Sun Equation, we introduced the gravitational variable that cannot be simply calculated based on current knowledge of ordinary matters. We named the new equation as the Sun Equation.

Moreover, we proposed the unique Sun Model of Universe. To some extents, our proposed model and theory provides better explanations of universe than Big-Bang model, Einstein's Static Universe Model, and Digges's Eternal Universe Model. As a matter of fact, our proposed model and theory can well solve and explain many paradoxes, phenomena, disputed concepts and observations, including but not limited to the Olbers's paradox, redshift in astrophysics, gravitational lens (bended space), either disputation...

Last but not least, there could be multiple subtypes of Sun Matters that are interacting with the lights; this contributes to the non-uniformity of the night. Olbers's paradox is not a paradox anymore because there are Sun Matters that serve as a cushion to consume the energy of photon in the lights from stars; thus human beings are able to enjoy the darkness and non-uniformity of the night.

Taken together, this article innovatively proposed that the Sun Model of Universe, the Sun Matters Theory, the Sun Waters concept, the Sun Variable and the Sun Equation. Like Albert Einstein's most famous quote "God does not play dice with the universe", scientists believe there are rules governing the universe. A number of theories and hypotheses were proposed, but none of them is perfect. Even the popular Big-Bang theory cannot faultlessly interpret many phenomena. In this paper, we proposed a brand-new theory and speculated an experiment to test part of the new proposal. With the advance of science, more aspects of this proposal can be testified. If, in the near future, the proposed ideas in this article are testified, the Big-Bang theory will be challenged and the origin of our universe has to be retold in a different way, either in a way of Bible or other ways of better theories. All space phenomena have to be re-examined with new ideas. Therefore, the theory and model published in this article will contribute to important discoveries in the coming Space Age.

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CONFLICTS OF INTEREST

The author declares no conflicts of interest regarding the publication of this paper.

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