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## Detection of a Pack-Photon: A Theoretical Analysis

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# Detection of a Pack-Photon: A Theoretical Analysis

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## 1. INTRODUCTION

This paper is an extension of ref [2]. In ref [2], a mathematical test showing that the stretching of spacetime occurred on the line of pressure during cosmic inflation, resulting into a different nature of spacetime inside the planet of mass applying pressure. From the mathematical test, the default nature of spacetime just before cosmic inflation was discovered as  $1.50 \times 10^{10}$  without a unit. This mathematical test is the prove of the statement "In an environment where there's gravity to some extent, the nature of spacetime is free. In an environment where there's little or no gravity, the nature of spacetime is thick". Reduction in thickness due to stretching depends on the amount of gravity in that environment. However, this default nature of spacetime led the way straight to dark energy. It proves the reality that indeed dark energy is the energy fluid of spacetime. With the value of the default nature of spacetime along with the speed of light, the value representing dark energy is presented as  $4.5 \times 10^{18}$ . With a suspicion that dark energy must be related to normal energy (Electromagnetic Radiation), the major concept of radiation from stars was reviewed. The result from reviewing the major concept of Electromagnetic Radiation from the stars led to the introduction of the term "Pack Photon".

The Theory of Everything [6] describes the two lights used in the creation of this universe as the Superior Light and Inferior Light. The Superior light as Dark Energy and the Inferior light as Electromagnetic Radiation (Energy). The inferior light (Electromagnetic radiation) has a major property of being able to fade quickly and on the other hand, the superior light – Dark

Energy doesn't fade, it exists forever, and it has an attachment (spacetime). For the inferior light to exist forever, it has to be merged with the superior light. The universe was created with an explosion of inferior light scattered to different areas in an environment of the superior light along with spacetime. Both entities were merged, the inferior light became the superior light. However, presently both entities have split, if both entities were still merged, humans will be able to see and observe dark energy and not energy (radiation).

This explanation implies that at some point energy (radiation) took the form of dark energy but presently energy exist on its own in its form. This was what led to the suspicion that some value representing energy (Electromagnetic Radiation) will be a similar value to the one representing dark energy ( $4.5 \times 10^{18}$ ). Thus, I reviewed the concept of Electromagnetic Radiation and introduced the term "Pack Photons". Stars are the only bodies that possess the inferior light in full scale. In ref [2], I found the value of the inferior light as  $4.5 \times 10^{16}$ . This value represents the value of the inferior light as a photon because I got this value with the reduced planck constant ( $\hbar$ ) and speed of light ( $c$ ), this value ( $4.5 \times 10^{16}$ ) along with the charge of an electron ( $1.60 \times 10^{-19}$ ) will give 0.0072, which is also the approximate value of the fine structure constant. This value (0.0072) represents the concept of an electron absorbing a photon. The stars are classical forms of matter that absorbed the inferior light during creation. Therefore, this value (0.0072) represents a star in quantum state. From my previous papers ref [2,5,6], I've been emphasizing on the fact that the value of the energy of a photon from the inferior light is  $4.5 \times 10^{16}$ . Due to the absorption of this light by the matter part of a star just before it appeared as the form of a star, I also said that the value of a photon energy from the stars (sun) is  $4.5 \times 10^{16}$ . At the point of creation, because these photons were being possessed by their matter part (electrons), they won't exist in the form of  $4.5 \times 10^{16}$  rather they would exist in the form of 0.0072. However, if the initial form of electromagnetic radiation (inferior light) still exists without being possessed by matter, we can now describe the value of the photon energy as  $4.5 \times 10^{16}$ . I now present a theoretical analysis on "Pack Photon". Figure 1 shows an illustration of a star in quantum state.

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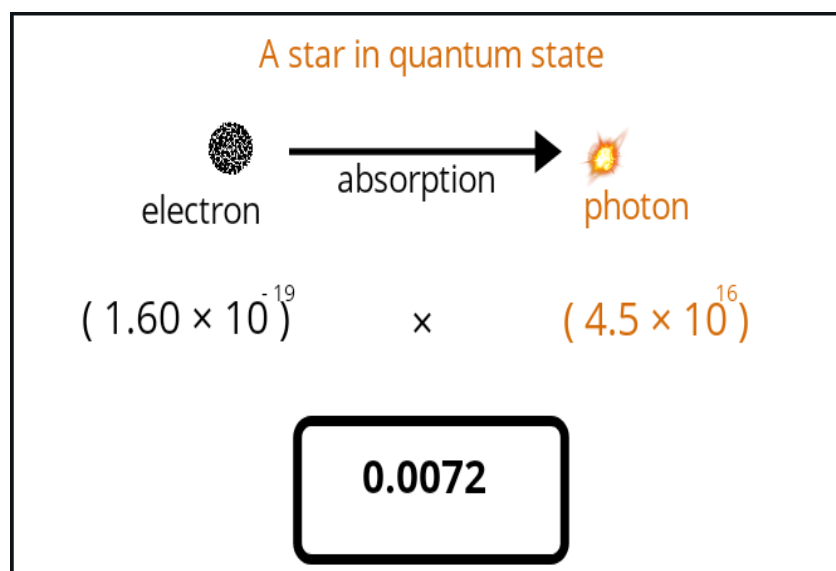


Figure 1

## II. A THEORETICAL ANALYSIS ON PACK PHOTON

This is the exact description of a pack photon in ref [2]

In this concept, as related to the stars, a term called "Pack Photons" is introduced, the reason for this is demonstrated with figure 2

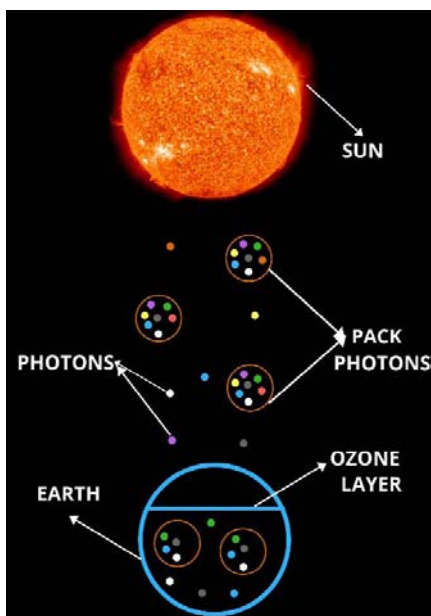


Figure 2

A pack photon represents the whole energy picture of a star in quantum form. Remember, stars consist of a mixture of all EM rays and can emit photons of different rays but can often emit photons that represents itself. Thus, a pack photon consists of sub-particles of all EM rays. From figure 2, it is seen that the UV photon (purple), Infrared photon (green), X-ray

photon (red), Gamma ray photon (yellow), radio wave photon (blue) microwave photon (black) and visible light photon (white) can all find their way to the earth's surface but there exist a photon that contains all, it is been emitted often, but its complete nature hardly passes the core of the sun.

Electromagnetic waves are characterized by their frequency and wavelengths, this means a gamma ray photon with a frequency can be reduced to a microwave photon or an infrared photon with a new frequency.

A pack photon represents the whole energy picture from a star as photon. Therefore, a pack photon is the highest energy photon from the spectrum. A pack photon which is a mixture of all particles of the spectrum can be reduced to a gamma ray photon, from gamma ray to an x-ray photon, and so on. It is the peak of the Electromagnetic spectrum. Hence, the stars are the only bodies that possess electromagnetic radiation in full scale with all mixtures of the spectrum. Thus, the stars can produce a pack photon.

The inferior light (Electromagnetic Radiation) consists of photons with an energy of  $4.5 \times 10^{16}$ . The stars (matter) at the point of creation, absorbed the inferior light, the stars now possess the inferior light. The stars in its matter form absorbed the inferior light (Electromagnetic Radiation) to give the picture we now see as the stars.

Each electron absorbed a corresponding photon from the inferior light. Thus, the energy value from each photon from the stars will be 0.0072 ( $7.2 \times 10^{-3}$ ).

Just after the point of absorption during creation, the energy value of a photon from the stars will be measured as 0.0072 but as time passes, a shuffle happens.

The stars produce their energy from nuclear fusion. Using our closest star (Sun), the energy produced by the sun is from nuclear fusion done at its heart (core). The journey of a photon from the sun's core away from its surface to any planet passes through a complicated process. After the creation of stars, all absorbed photons of the inferior light by the electrons are drawn at the core of a star and re-emitted still with

an energy value of 0.0072. However, a shuffle happens just outside the core, these photons with an energy of 0.0072 are shuffled by other parts of the sun and re-emitted in lower frequencies. This is what led to the characterization of the rays of the spectrum according to their frequency and wavelength. This concept of shuffle will lead to the term "Reduction of Pack-Photons".

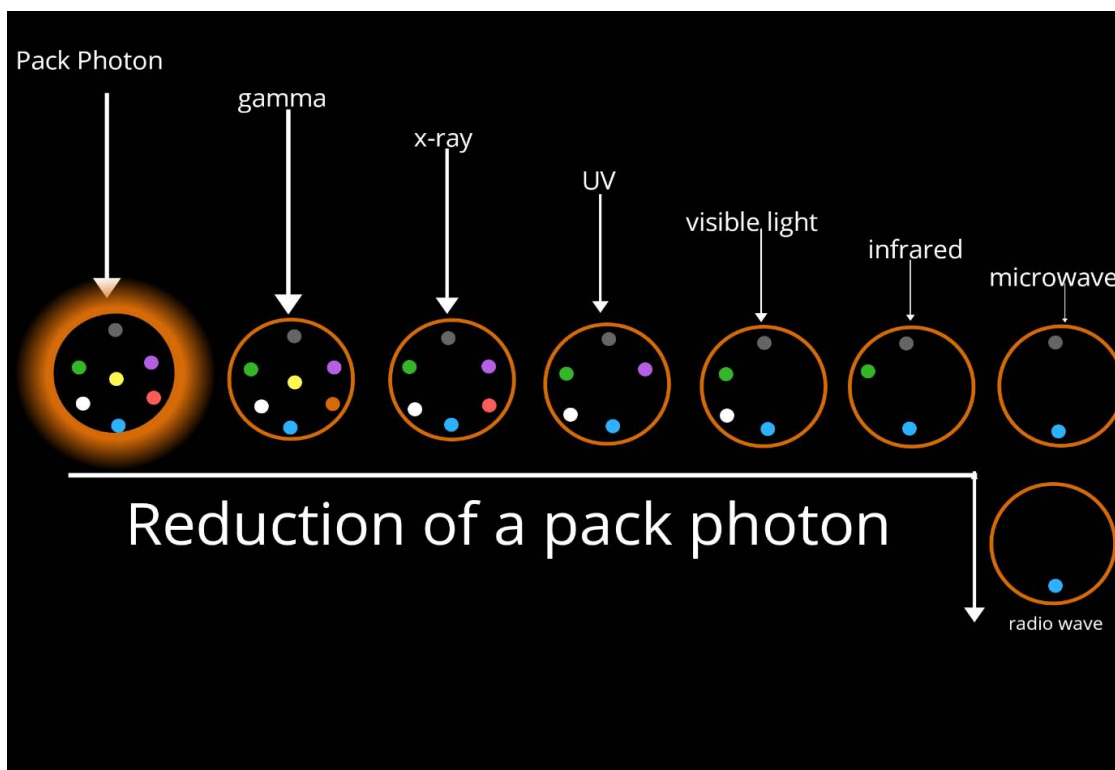


Figure 3

Gamma ray, x-ray, UV photons etc., are all reduced version of a Pack- Photon. A Pack-Photon is the peak of the spectrum with highest frequency and the lowest wavelength. Figure 3 shows the reduction of a pack photon. UV photon (purple), Infrared photon (green), X-ray photon (red), Gamma ray photon (yellow), radio wave photon (blue) microwave photon (black) and visible light photon (white). A Pack -Photon is the default. It can be reduced to gamma, from gamma to x-ray, from x-ray to UV and so on. The sequence continues, from figure 3, an x-ray photon does not have the gamma piece (yellow) on it. Also, in a UV light photon, the x-ray piece (red) is absent, and so on. The sequence continues up to radio wave. Figure 3 is a modification of figure 2 from ref [2]. Instead of the idea that other photons of the spectrum are emitted on their own rather all photons from the core of the sun are as pack photons but can be absorbed by other parts of the sun and re-emitted in lower frequencies that can find their way to anywhere outside. However, pack-photons are being emitted often at the core of the sun which we can't see but these pack-photons are only being able to

escape to the surface in its complete form, once in a long period (occasionally).

The Electromagnetic spectrum was discovered long ago, the concept of pack photon is just being introduced in this paper(2020). This means, there's an EM radiation form higher than the normal gamma rays, if it has been observed, observers might just categorize it as a form of gamma ray. A pack-photon might have been seen/observed but described as a gamma ray photon just because gamma rays are the highest currently in the spectrum. Thus, calculations will help differentiate.

### III. MATHEMATICAL TEST

In some of my previous papers, I included the unit for the value  $4.5 \times 10^{16}$  as joule (J), in some, I didn't include a unit. The Physics community will be responsible for the decision of the unit. I'll just do my calculations without a unit to avoid complications. The value  $4.5 \times 10^{16}$  as the energy of a Pack-Photon from the inferior light may not be in joules, it could be in eV or a

unit that doesn't exist, and we can never prove or measure that value because the inferior light has been absorbed by the stars which are classical forms of matter. The value of a Pack-Photon changes to 0.0072. This value (0.0072) is preferred to be in joules but I proceed to get the frequency and wavelength of a pack-photon.

#### a) Frequency

The Equation ( $E=hf$ ) is the relationship between the energy of a photon ( $E$ ) with its frequency ( $f$ ).  $h$  is the planck constant.

If the value (0.0072) is assumed to be in joules. The reduced planck constant in joules/sec

( $1.054 \times 10^{-34}$ ) is used. The frequency of a pack photon is

$$f = E/h. f = 0.0072/(1.054 \times 10^{-34})$$

$$f = 6.83 \times 10^{31}(\text{Hz})$$

#### b) Wavelength

The wavelength ( $\lambda$ ) of a photon is given as ( $\lambda = c/f$ , where  $c$  is the speed of light ( $3 \times 10^8$ ) and  $f$  is the frequency.

Therefore, the wavelength of a pack photon is ( $(3 \times 10^8)/(6.83 \times 10^{31})$ ).

$$\lambda = 4.39 \times 10^{-24}(\text{m})$$

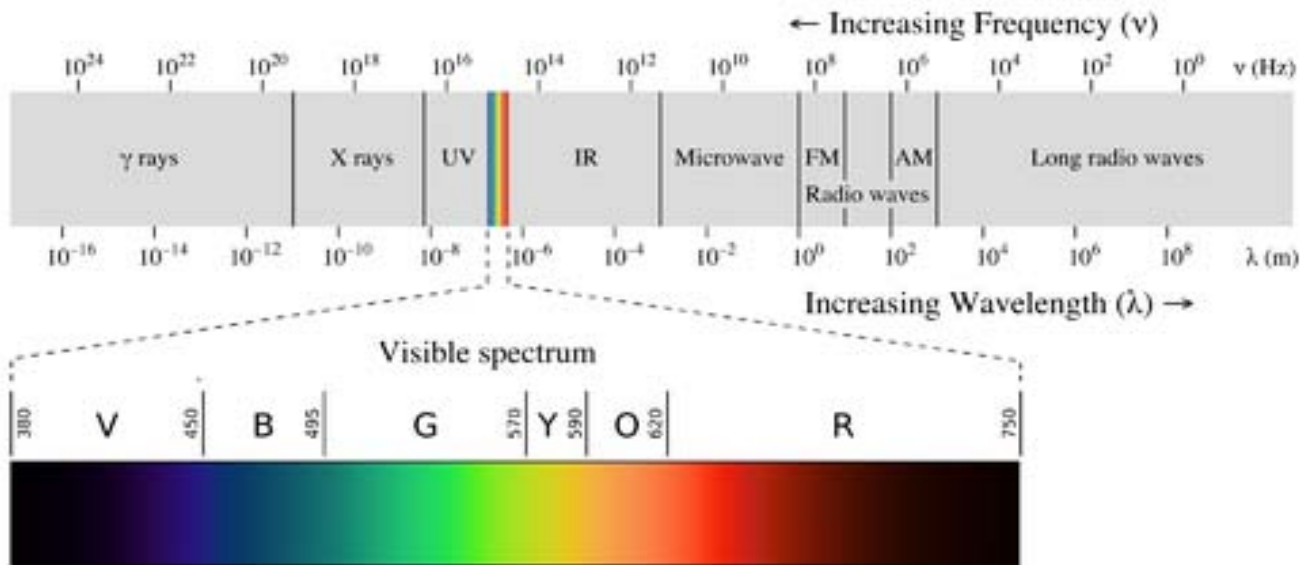


Figure 4

If we compare the details of the highest energy (gamma ray) of the spectrum from figure 4 with the details for a pack – photon, it is seen that a pack – photon is higher than a gamma ray.

Figure 4 shows the electromagnetic spectrum; gamma ray has a frequency (Hz) of  $10^{20} - 10^{24}$  and a wavelength (m) of  $10^{-16} - 10^{-12}$ . A photon higher than a gamma ray photon will have a frequency of  $>10^{24}$  and a wavelength of  $<10^{-16}$ . However, from the mathematical test, the frequency of a pack photon is of  $10^{31}$  which is  $>10^{24}$  and the wavelength is of  $10^{-24}$  which is  $<10^{-16}$ . Thus, the mathematical test/prove is complete and the details for a pack-photon should be the peak of the spectrum. Hence, the spectrum needs an update after an observational prove.

#### IV. A CLUE ON OBSERVATIONAL PROVE

Due to the shuffling that occurs as explained, a pack photon in its complete state or close to its

complete state is observed at the surface of a star once in a while (occasionally). I can't say the exact period it can be emitted but I know all things/process are not perfect, there are days/periods that a pack-photon will be emitted to the surface of the sun in its complete form. However, its almost impossible for a pack-photon to find its way to earth as its complete nature rather its reduced version is seen on earth which are other forms of the spectrum. The pack photons are emitted right from the core of the sun. If it manages to escape shuffling, the closest position to be observed and noticed would be from the position of the sun's equator. This observation can be done by the help of telescopes, satellites or a photon detector at the outer space. The pack-photon maybe difficult to detect, but its discovery and confirmation of values will lead to the concluding acceptance of the "Theory of Everything".

## V. CONCLUSION

A pack photon might have been seen/observed and described as a gamma ray photon, but I'll just give a little gap. Any form of ray with a frequency (Hz) higher than  $10^{26}$  should be regarded as a pack-photon i.e a pack photon will have a frequency (Hz) of  $10^{26} - 10^{31}$ . The help of the organizations with telescopes and satellites or photon detectors at the outer space are needed to prove this concept.

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