International Journal for Multidisciplinary Research (IJFMR)



E-ISSN: 2582-2160 • Website: <u>www.ijfmr.com</u>

• Email: editor@ijfmr.com

# Light Needs A Medium to Travel (Aliens Travel In It)

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## **ABSTRACT:**

In physics any object needs a medium to travel, light can travel without a medium. That this statement is not true and that light needs a medium to travel; This paper aims to explain with sufficient evidence that the reason of light bends is not because the surface is curved (as Einstein suggested), but because the structure of the medium through which the light travels causes it to bend. This paper describes by the two postulates that black holes cannot be seen and that light bends near the massive object.

#### **DESCRIPTION:**

Is space really a vacuum? Is there nothing but air around us? How does water vapor rise above Earth's gravity? The water vapor that go up become clouds, why don't those clouds go above a certain height and what prevents it? Why temperature decreases with increase in altitude? Why is space always cold? Why does the sun we see in the afternoon and the sun we see in the evening look different in size? Why does lightless space appear black? Why can't we see black holes? Is there a common cause for all of these? Starting with Newton, many other scientists believed that light needed a medium or field to travel. In 1887, American physicists Michelson and Morley assumed that light must travel through an air-like medium called "Aether" and conducted an experiment to prove it. But the results of their experiments showed them that light does not need a medium to travel. This experiment is still referred to as the failure experiment in the scientific world.



As the results of their experiments showed that there was no medium for light to travel called "Ether", it has been said that no medium is needed for light to travel from that day to this day. My question is, if they had done the same experiment they did, hypothetically, near a celestial body many times the mass of the



Sun, would they have gotten the same result as they did on Earth? That is, would there have been a change in the path of the light or not?

It is a scientific fact that a massless object is not affected by gravity. Light is massless. So how do massive objects like massive stars bend massless light? How do black holes pull in massless light and not emit it? In his 'General Theory of Relativity', Einstein mentions the phenomenon of bending of light as "massive objects bend the space-time around them, thus light traveling through the curved space is also bent".



On the day of the total solar eclipse on May 29, 1919, British astronomers Dyson and Eddington proved Einstein's prediction that light bends near supermassive objects like the Sun in the above experiment.



However, I doubt that the light bends is due to the space-time curvature! If the curvature of space is what causes light to bend, light entering one side must follow the curved space-time structure and circle around! Because according to Einstein, space is curved on all sides around an object with mass! But that doesn't happen!

The fact that massless light bends and that a massless object does not experience gravity are contradictory! As far as I am concerned, if light is to bends, it is only possible if it travels from one medium to another. So, could the reason for the bending of light near massive object not be due to the curvature of space-time, as Einstein suggested, but because there is some kind of medium that we do not yet know about? Our ancestors defined the five basic elements of nature as earth, water, air, fire and space (Space is represented as "Aagayam" in Tamil language.). Among these, the four elements of earth, water, air and



fire have a visible effect on material things and are easily perceptible to us. But what effect does "Aagayam" defined as the fifth element have on us and on the environment? Why did our ancestors define it as one of the basic elements?



Perhaps Aagayam is the primary medium that surrounds us, that we cannot easily perceive, that we have yet to discover? Does light travel in this medium (Aagayam)? Are we not aware of its structure and impact because we are used to living with it?

Whether an object (medium) exists or not can be ascertained in two ways. One can directly perceive; Another is to find out through experiment. Beyond these two, even if they cannot be detected directly and experimentally, the effect they have on other objects can lead to the existence of an object (for example, the existence of black holes). So around us, I think there is an irreducibly omnipresent primary medium throughout the universe. It could be the field, Einstein's space-time curvature (the space-time curvature could even be a type of medium), Michelson & Morley's 'Aether', Black energy, or even our ancestors' Aagayam. But of course there is a medium around us. My guess is that light travels in it. The presence of such a medium can also be clearly felt through certain events. I will continue this thesis by considering the medium 'Aagayam' as such.

## MEDIUM THROUGH WHICH LIGHT TRAVELS (AAGAYAM):

You can feel coldness in high places like hilly areas. Temperature decreases as you go up from sea level. But when we go up above sea level, we actually get closer to the Sun than down below! So there must be less heat at the bottom and more heat at the top! In contrast, there are lower temperatures as you move closer to the Sun and higher temperatures at sea level when you are relatively far from the Sun! Why this happens? What is the reason for this?





If there is more heat in a particular place, it means that there is more light. This means that when going up, the intensity of light should decrease and when going down, the intensity of light should increase. If this happens, the heat will decrease when going up and the heat will increase when going down. What causes the density of light to vary with height? If the medium through which light travels is Aagayam, how does it make this possible? What structure has it got?

#### STRUCTURE OF THE MEDIUM (Aagayam) THROUGH WHICH LIGHT TRAVELS:

Based on the definition of 'medium' is the transport of an object, system, or energy from one place to another', the medium that I am proposing, the 'Aagayam' is not known what kind of molecules it is made of. Its properties cannot be completely eroded now. However, it is spread throughout the universe with equal density. All the objects of the universe exist within it. It has the property of being compressed or crushed by object that have mass. An object with mass occupies a specific place in the Aagayam medium and compresses that medium from bottom to top according to its mass. This compression is greater near the object and decreases as it moves upwards until at some point it reaches the equilibrium state.



For example, a massive object called Earth occupies a specific place in the Aagayam medium according to its size. Also, according to the strength of its mass, it compresses the medium around it, the Aagayam medium, starting from its surface and moving upwards from below. Compression increases near the Earth's surface and decreases as it moves up, until at some point the compression of the Aagayam caused by the Earth ceases. So do all the massive objects in the universe.

As objects with such mass compress the Aagayam medium from the bottom to top, the density of the Aagayam medium becomes greater near the object and less as it goes up. This density difference also affects the light traveling through it. One thing we generally know is that light bends when it passes from a medium of lower density to another medium of higher density. The same light-diffraction phenomenon occurs when light travels through the Aagayam medium.

For example, suppose light travels from air into water. When light enters a much denser medium such as water from a less dense medium such as air, light-diffraction occurs and its path changes. But in case of Aagayam the same medium behaves in two ways (like two mediums of low density and high density) due



to difference of its density. The light-diffraction that occurs when light enters water from air is Immediately rather than gradual in a Aagayam medium. This is due to the gradual density variation of the Aagayam medium. The density difference of this medium acts like a convex lens, focusing the sunlight on the Earth's surface. Just as when light is focused by a convex lens, it is hotter at its focus and less hot near the lens, light entering the Aagayam medium is gradually compressed, causing more heat at the Earth's surface and less heat as it goes up. This, I believe, is the reason why the temperature is lower in mountainous regions (high altitude).



The higher the altitude, the lower the density of the Aagayam medium; As the density of Aagayam decreases, so does the density of light; As the density of light decreases, so does the temperature. Thus it can be understood from the above events that there is a Aagayam medium around us and its density decreases (compresses) from the bottom to the top! Also, I think this Aagayam medium is also responsible for 'Einstein's cross' phenomena. A space object of high mass compresses the surrounding Aagayam medium from bottom top. When light from a star behind the object enters into a compressed Aagayam medium (similar to light passing from one medium to another), light-diffraction occurs and Einstein cross phenomena occur. It is my opinion that this does not happen because space is bent (as Einstein said), but because something called the Aagayam medium deflects light.

## WHY CAN'T BLACK HOLES BE SEEN?





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E-ISSN: 2582-2160 • Website: <u>www.ijfmr.com</u> • Email: editor@ijfmr.com

A black hole is not really a hole. They are a system of many kinds of particles of extreme mass bound together with extreme closeness. It can be spherical or any other shape. Let this be an aside. Even if we take it for granted that there is a medium called Aagayam and that it is compressed by the massive object, how can we say that the light travels in the medium of Aagayam itself? may be suspected. Since light travels in a Aagayam medium, it can travel only as long as that medium is continuous. If the continuity of the medium is interrupted, light cannot travel any further. We saw above that objects with mass compress the Aagayam medium. A black hole is very, very massive. This extreme mass compresses the surrounding Aagayam medium as well, compressing it as it passes above its surface. That is, the Aagayam medium is not touching the surface of the black hole, but to the extent that the medium itself starts at an extreme height above the surface, the extreme mass of the black hole compresses the medium and pushes it up. Since light travels only in Aagayam medium, we cannot see black holes without Aagayam medium. For us to see an object, light from a particular point must travel to reach our eyes. If we can see many celestial bodies like moon and galaxy but not black holes, it means that something present in moon and galaxy is not in black hole. I believe that Aagayam is the medium through which light travels in the moon and stars, and black holes do not have it, so we cannot see it.

So, based on the idea that massless light cannot be bent by gravity, and that light is bent only by lightdiffraction, the reason we can't see black holes is not that they don't pull light in and let it out, but that light doesn't travel there because there's no Aagayam medium, so we can't see them. Based on this, a black hole can actually be any color. We cannot see it because the Aagayam medium through which light travels does not touch its surface. A vacuum can be found between the surface of the black hole and where the compressed Aagayam medium begins. I consider that to be the true vacuum. What we now believe to be a vacuum is not a real vacuum. Aagayam medium is all around us and without realizing it we believe it as vacuum.

#### THE RELATIONSHIP BETWEEN GRAVITY AND AAGAYAM MEDIUM COMPRESSION IS:

I assume that just as the structure of the Aagayam medium is, so is the action of gravity.

- The density of the Aagayam medium is greater near the object with mass; Similarly, the effect of gravity is greater near an object with mass.
- Density of Aagayam medium decreases with altitude; Similarly, the influence of gravity decreases with increasing altitude.
- Objects with greater mass compress the Aagayam medium more; Similarly objects with more mass have more gravitational pull.

Given the above correlation, is the structure of the Aagayam medium responsible for gravity? The question arises. The material moves towards the side from which the Aagayam medium is compressed. Thus the speed at which materials move depends on how closely the Aagayam medium is compressed. Perhaps if this is true, objects with mass compress the Aagayam medium from the bottom to top. Thus following the structure of the Aagayam medium which compressed from the bottom to the top, other substances descend from the top (gravitational force). This movement continues as long as the Aagayam medium remains. So what if we could create an "anti-mass"? Objects with anti-mass may have the property of compressing the Aagayam medium from top to bottom (opposite to the action of the object with mass). If the gaseous medium compress from top to bottom, then the object, which has acquired anti-mass, will move upwards at high velocity without any thrust. Compression of the Aagayam medium from top to bottom will do this.



(Perhaps extraterrestrials can travel in their vehicles by compressing the Aagayam medium from top to bottom by using any "anti-mass technology").

#### **CONCLUSION:**

The Aagayam medium is all over the universe. Greater mass compresses this medium in a bottom-top direction. Light needs Aagayam medium to travel through. The light travels in this Aagayam medium as long as it is continuous. The compressed structure of Aagayam medium and the action of gravity are similar. If a system with anti-mass can be created, it can travel rapidly upward in the wide Aagayam medium without any thrust.