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Physics letter: Cosmical observations and experiments against the relativistic explanations of the Doppler effect and the Gravitational effect of the light

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Abstract: Most physics lovers asked themselves several times: Why should we limit the velocities in our nature to the velocity of light C ? And why a particle of light shouldn't have an ordinary mass even if the redshift or blueshift of light have been discovered. In my previous work about the Michelson-Morley experiment, I concluded that the light can be studied easily like all the other waves. Actually, many scientists venerated the light by some theories that gave a limit to the velocities of photons and abolished their mass. This work makes a conclusion about Einstein's relativity after an easy study about the Pound-Rebka experiment which deals with the Gravitational effect of light, and you will find also some logical remarks about the Doppler effect.

Keywords : Pound; Rebka; Michelson; Morley; experiment; the light; photon; redshift; blueshift; Einstein; relativity.

1. Introduction

As a result of my work about the michelson morley experiment (Akram Louiz, 2020), we can accept the change of the frequency of the light when the reference frame changes but we should also accept that the velocity of the light changes too. For example, in the doppler effect, the real constant is not the speed of light but the wavelength since the source of the light causing the wavelength doesn't change but the reference frame changes.

You can also discover my answer to the time problem of the GPS system in my work about Newtonian mechanics rotations (Akram Louiz, 2020). It is a work that can also be applied to the cases where atomic or quantum particles rotate at a speed higher than three quarters of the speed of light. The steps proposed for the fast rotations studies allow to avoid the time dilation as a solution. The Pound–Rebka experiment was the experiment in which photons were emitted from the top of a tower and measured by a receiver at the bottom of the tower (Yarman et al., 2016, Maluf et al., 2009) and (Pound et al., 1960).

I made this work about the Pound-Rebka experiment by using Newtonian easy mechanics and I found a correct answer. Hence, this should encourage us to revise many principles about the field of optics which is not perfectly studied. The imperfections in the fields of optics do not only concern

theories but also widely used formulas like the ones that I suspect in my recent article by using concave mirrors (Akram Louiz, 2023).

2. The Doppler effect and scientific observation principles

We should agree with the Quantum mechanics experts who don't consider that the photon mass is absolutely null but very small instead. So we have the right to use Newtonian mechanics when dealing with light photons but with caution (by considering also my thesis about Newtonian mechanics rotations).

Furthermore, in the Doppler effect, the real constant is the wavelength since the source of the light doesn't change the manner of light production, whereas the real variables are the frequency and the speed of light. I am suggesting that the wavelength depends only on the nature of production of light at the source of light. Indeed, the frequency changes, but it is the light speed C that changes proportionally, and not the wavelength.

At the end, the equation : ***C = (frequency × wavelength)*** stays always correct.

Also, the matter and antimatter experiments never consider radiations which are faster than the speed of light. The gamma emissions of nuclear reactions consider also that gamma radiations have the speed of light and have a wrong exaggerated small wavelength.

Now the question that we should answer is:

Can we make an experiment that finds the wavelength of a radiation in a manner that is perfectly independent from the frequency ?

Everybody can also know from some cosmic observation articles that we could detect from some cosmic events that gamma rays are faster than light rays. This already has a ridiculous and complicated explanation by using Einstein's principles of relativity (Deng et al., 2014, Kumar et al., 2015).
However, my work about the Michelson-Morley experiment gives the correct and obvious explanation since it also proves that the speed of light calculated by Maxwell is not the ultimate speed in our nature. We proved easily in that article that the rate (percentage) of fringe shift by the formulas demonstrated is null and thus it confirms theoretically that the result of Michelson-Morley experiment is perfectly null (Akram Louiz, 2020). However, we can't conclude that the luminiferous aether doesn't exist like Einstein said or that the speed of the light doesn't change by a changing reference frame. This criticism about the Michelson-Morley experiment has been widely accepted and is also cited in the very useful book titled "*The Worldwide List of Alternative Theories and Critics*" (de Climont, 2020).

3. The Pound-Rebka experiment

The energy of photons increases when they travel toward a gravitational source which is the Earth in this experiment. The Pound-Rebka experiment measures the change of light (the blue shift effect) while it is moving from the top of a tower downwards (Pound et al., 1960, Ziefle et al.,2022).
Let's consider during this experiment that the photon has a mass m that causes the gravitational effect. Consequently, during the gravitational blueshift, we have:

$m \times g = m \times \gamma$

where ɣ is the acceleration of the photon downwards and g is the gravitational acceleration.

Let's consider that V_r is the velocity of the received photon and that V_e is the velocity of the emitted photon. And thus we have: $g = \frac{V_r - V_e}{t}$ where t is the time between the emission and the reception of the photon.
Let's consider that V_s is the velocity of the photon when its source S is fixed and doesn't move. Consequently, during a Doppler effect: $V_e = V_s - v_s$ where v_s is the velocity of the source (upwards).
Let's consider that the gravitational effect and the doppler effect abolish each other.
And thus: $V_s = V_r$.
Consequently: $V_e = V_r - v_s \Leftrightarrow v_s = V_r - V_e$

Finally, we conclude that: $v_s = g \times t$ and it is the correct formula that can be demonstrated for the Pound-Rebka experiment differently by using Einstein's relativity.

4. *The photon mass*

I suggested that the gravitational effect is because of the real mass of a photon. I also suggest that this mass can be found easily by making or observing a gravitational blueshift or redshift of the light in a vacuum, and by using the famous formula: $\Delta E = \frac{1}{2} \times m \Delta V^2$.

Where: $\Delta V^2 = V_r^2 - V_e^2$ and $\Delta E = E_r - E_e$ with E_r is the energy of the received photon and E_e is the energy of the emitted photon.

5. A G*eneral letter to the lovers of physics*

By using the acceleration of the photon in Special Relativity instead of the velocity of the photon, Einstein's lovers can have a correct answer. Also, by using the frequency of the lightwave instead of the photon velocity, Einstein's lovers can also have a correct answer.
However, you will notice that in all Einstein's theories, you should always avoid the use of the speed of light in your calculations in order to have good answers, and that makes you use more complicated methods.
As a result of my work about the Michelson-Morley experiment and after verifying many light effects, I accept the change of the frequency of the light when the reference frame changes. However, in this case, the velocity of the photon changes too and the real constant is obviously the wavelength. This is the case of the doppler effect: The correct constant is not the speed of light but the wavelength since the nature of the light source causing the wavelength doesn't change when the reference frame changes.
I believe that " The constant light velocity" is a non-objective complex that physicians are facing.
Physicians can use my method of Michelson-Morley experiment in order to prove that the lightwave is an ordinary wave.

Let's discuss this matter also by criticizing philosophy : By blindly following Spinoza's religious ideas, Einstein tried to prove that the light is Superior (like if the light has the characteristics of a God). Hence, he refused that the light needs another element to be natural. This is the reason why he tried to deny the aether and the mass of the photon.
We should believe without any kind of fear that we live actually in a natural Euclidean where there is no spacetime nor curvatures. We have also the right to believe that aether exists around us.
A light wave needs the aether to propagate and the use of the mass of the photon can help any researcher to make easy and obvious demonstrations concerning the behavior of the light.
Many scientists say that Maxwell's equations of electromagnetic waves prove that the speed of light is constant but that is totally wrong. Everybody knows that the SI international system of units has abolished since 2019 the exact values of the permeability and the permittivity of the vacuum (Michaud, 2013, Leuchs et al.,2023). Hence, the vacuum permeability μ_0 and the vacuum permittivity ϵ_0 should now be found experimentally and independently from the value of any constant velocity of the SI international system of units. However, the experiments proved that the uncertainty of the measure of the vacuum permeability and the vacuum permittivity is enormous, and thus, even if the inverse of the root of the product $(\mu_0 \times \epsilon_0)$ has the dimensions of a velocity, the vacuum permeability and permittivity can no longer be deduced from the constant speed of light considered by Maxwell (Michaud, 2013, Longair, 2008).
Einstein's theories were rejected before me by two famous Nobel laureates who are Philipp Lenard and Johannes Stark. A book entitled: "Hundert Autoren gegen Einstein" has even been published against his theories and it was the result of a collaboration between several scientists of that time (Gobilard et al., 2019).
Finally, the scientists whose purpose is to make physics perfectly objective and free from all subjective beliefs should never be considered as Pro-Nazi scientists. Many researchers still produce new articles in the field of general optics and its theories (Bhattacharjee et al., 2022, Szostek et al., 2019), and this proves that this field has never been a perfectly studied field of physics despite its simplicity. And thus, the field of optics deserves that we study its phenomena with objective and new methods without any kind of subjective principles.

*6. A n*ew suggestion concerning the product of the permeability and the permittivity of the vacuum

Since the inverse of the root of the product of the vacuum permeability and the vacuum permittivity has the dimensions of a velocity, why can't we consider that this value is equal to the propagation speed of a new hypothetical electromagnetic wave which is directly related to the electromagnetic field which is omnipresent on Earth?
This suggestion can be logical since the mathematical demonstrations of Maxwell's equations don't use any characteristics of the light but only the state of the vacuum where there is only the electromagnetic field of Earth.
Maybe this electromagnetic wave related to the electromagnetic field of Earth has a strange propagation velocity that fluctuates if the Earth electromagnetic field changes.

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