

Speculation on the Properties of Light and Gravity

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I've long wondered about the contradictory nature of things like light and gravity. ¹ Many years ago, I hypothesized that gravity works because there is an as yet undetected matrix, like a net of energy, into which certain object sink further, depending on their mass. These depressions in the gravitational field represent the strength of attraction of two material bodies. When enough matter is collected, the energy network breaks open, creating a black hole. That, in simplified terms, is how I understand gravity. The math makes sense. The observations make sense.

Light, however, has always eluded me, save for my understanding of why we don't observe matter traveling at speeds greater than the speed of light. But that's another story and one with which I have baffled physicists for decades. ²

Einstein stated that the speed of light in a vacuum is constant. Observations bear that out. The real question, for me, is "Why is the speed of light constant?" and "Why does it travel at that specific velocity?"

Perhaps it is because the light, in a vacuum, is traveling through the same matrix of undiscovered energy that is responsible for gravity. Perhaps it is not being propelled to that speed, but is being drawn along at that speed by the properties of the matrix.

That leaves the quandary of explaining the dual properties of light: particle and wave. Once visualized within the hypothesized matrix, one possible explanation arises. The photon or particle, unlike many others, is volumetrically unstable. If each photon were composed of matter that expanded in three dimensions, instead of the two-dimensional waves we find in physics books, the conundrum fades. The rate of expansion and contraction, like a balloon blowing up and deflating, would account for the frequency and amplitude attributes of the photon without replacing its inherent mass.

DISCLAIMER: I am not a physicist, but have always been interested in both insoluble problems and physics. This paper is not meant to be a definitive explanation of the properties of light, but may serve to stimulate others who are better equipped than am I.

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¹ Gravity: An Hypothesis. Cuba, T. 1983.

² Einstein's math does not predict that matter cannot exceed the speed of light. It predicts that matter traveling at the speed of light is pure energy. Matter traveling at speed greater than the speed of light once again has mass. The energy at the speed of light is the peak of the energy-matter complex. This is presented in greater detail in the article, *Light and the Red Shift*. Cuba, T. 1982.