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The theory of the illusions of the expanding universe and the constant velocity of light.

Abstract: Here, I theorize how the Hubble red shift data (**Wikipedia (2013)** *Accelerating universe*) does not necessarily mean that the universe is expanding, but rather provide an alternative theory that the speed of light velocity limit varies throughout the cosmos/universe, which is why such red shift data is observed, thus the illusion that stars further away are moving away faster than those closer to us. Thus the expansion of the universe is likely to simply be a mis-interpretation resulting from not considering that the speed of light varies in other regions of the cosmos/universe. Ie: **I postulate that the redshift seen from stars far from Earth is due to:**
- A) **Differences in the velocity limit of light in regions far from Earth**
- B) **To gravitational red and blue shifting**
- C) **To relative movement between the emitter and detector, (not from the expansion of the universe.)**

To begin, I must explain some of the McMahon field theory (2010)

McMahon field theory summary:

Special relativity applies to particles or masses moving close to the speed of light, which is the case for electrons moving as electrical current in a wire, as shown in the paper: **McMahon, C.R. (2015)** *"Electron velocity through a conductor"*. Thus, special relativity applies to such particles, which allows us to observe special relativity in the real world as the magnetic field. Thus, through the magnetic field, McMahon field theory explains that particles moving near the speed of light appear as energy fields.

First, allow me to present a new understanding of energy, as already presented in McMahon field theory: Theoretical unification of relativity and quantum physics, thus methods to generate gravity and time. (2010).

This theory begins explaining the nature of light using an example of electrons moving through an electrical wire. Since the velocity of these electrons can be considered as at or near the speed of light, we can assume that they are affected by both time dilation and length contraction, effects predicted by Albert Einstein's famous theory of relativity.

Let's perform a thought experiment: Let's imagine a stretched out spring. Let the straight stretched out spring represent the path of electrons moving in an electrical wire. Now, since length contraction occurs because of relativity, the electron path is affected. As a result, the straight line path of the electron is compressed. This is the same as allowing a spring to begin to recoil. As a result, the straight line path of the electron begins to become coiled. I call this primary coiling. This is the effect length contraction has on mass as is approaches the speed of light and is dilated by length contraction. When a particle such as an electron reaches the speed of light, it becomes fully coiled or fully compressed, and Einsteins length contraction and time dilation equations become equal to zero and "undefined". This particle, now moves as a circle at the speed of light in the

same direction it was before. If this particle tries to move faster still, it experiences secondary coiling. Ie: the coil coils upon itself, becoming a secondary coil. This is why energy is observed on an Oscilloscope as waves: we are simply looking at a side on view of what are actually 3-dimentional coiled coils or secondary coils. Waves are not simply 2 dimensional; rather, they are 3 dimensional secondary coils. It was easy for scientists of the past to assume waves were 2 dimensional in nature, as the dimensional calculations and drawings for relativity were carried out on flat pieces of paper which are also 2-dimentional. The human imagination, however, is able to perform calculations in multiple dimensions. Now, let's consider the effect of time dilation.

When an electron approaches the speed of light, according to relativity, it undergoes time dilation. What does this actually mean? I believe this is the effect: time dilation allows a body, particle or mass- in combination with the effects of length contraction, to exist in multiple places at the same time. This is why we observe magnetic flux. Electricity is composed of high speed electrons, so these electrons would be affected by time dilation and length contraction. As a result, the electron is both inside the electrical wire, and orbiting around the wire as magnetic flux (because of full primary coiling at the speed of light). Magnetic flux is the combined effect of length contraction and time dilation on the electron. The coiling effect is why electrical wires carrying electricity exhibit magnetic fields- the electron path is compressed into coils, and time dilation permits the electron to occupy multiple positions at the same time, which is why magnetic flux is detected as coils at different distances from the electrical wire. Please refer to figure 1 on the following page.

Time point 0 — Particle at rest
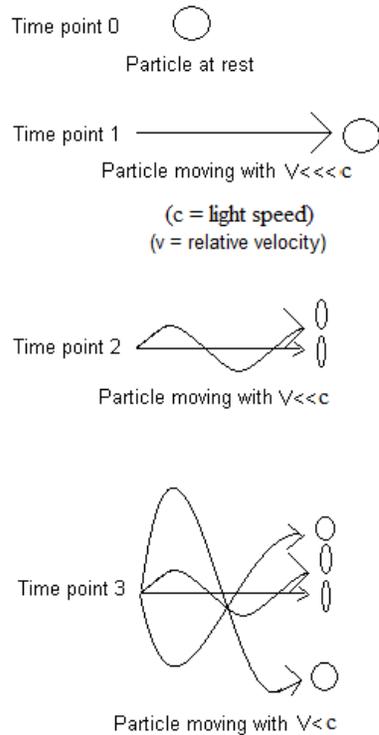
Arrow = path particle has taken

Time point 1 — Particle moving with V<<<c

(c = light speed)
(v = relative velocity)

Einsteins length contraction and time dilation equations take effect at time point 2, when the coiling effect starts. Time dilation allows the electron to exist in multiple places at the same time, so here we see the electron in two places at once. The electron on the original particle path appears very compressed, because the space it occupies on its straight line path appears compressed due to length contraction. However the other position the electron now also occupies also experiences length contraction, but it appears less compressed because its path coils.

Time point 2 — Particle moving with V<<c

As the particle moves faster, it appears in more coil orbitals at the same time, rotating around the original particle, and further from the original particle. The bigger the coiled path, the less compressed the particle appears in that coiled path.

This is why the mass of the particle appears to be increasing mathemathematically according to Einsteins relativity theory- we are simply mathematically adding the mass in all the positions the particle occupies. The particle mass has not actually changed, but because it exists in more than one place at a time, mathematically it appears to be gaining mass as it approaches the speed of light.

This is also why we observe magnetic flux around wires carrying electrons which move close to the speed of light.

Time point 3 — Particle moving with V<c

Figure 1: particle relativity- Taken from the McMahon field theory (2010): What we observe as relative stationary observers of a particle as it travels faster.

However- the McMahon field theory goes on to explain much more, including the electromagnetic spectrum- hence light, which I will briefly cover now. Refer to figure 2 below:
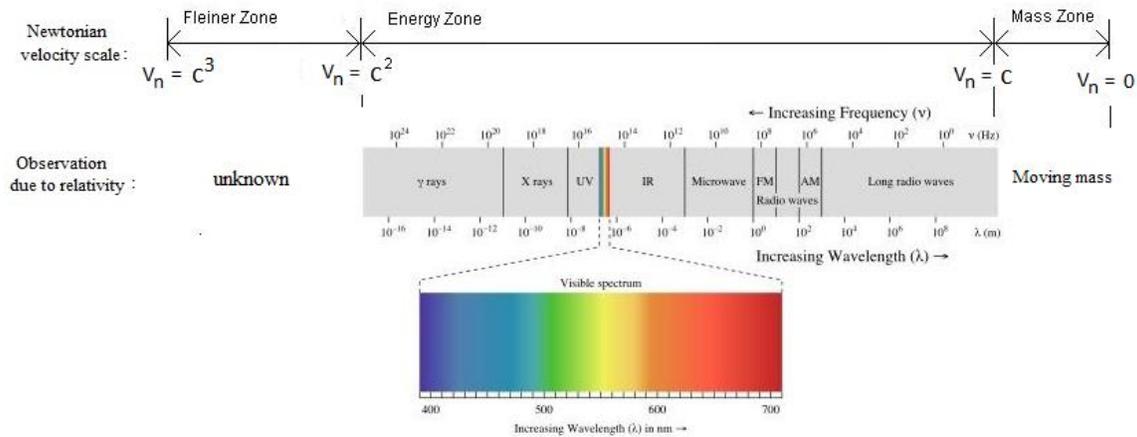
Figure 2: How an electron is observed at different Newtonian speeds: modified from the McMahon field theory (2010): Here, we see that as an electron moves with increasing speed according to Newtonian physics (although the speed we observe is dilated back to that of light because of relativity as in figure 4) and becomes a coil because of relativity, as the electron speed is increasingly dilated back to light it is observed as different types of energy. This is because the electron becomes more coiled (more velocity dilation) as it tries to move faster, so we say that the frequency increases and wavelength decreases. In this diagram, let the value of true, un-dilated Newtonian velocity due to relativity be Vn as in figure 4, and let the velocity of light be equal to c. I believe that electrons are on the boarder of mass and energy, so in the diagram above electricity would be at the point where Vn=c. If the electrons in electricity tried to move faster, they would be compressed further into a secondary coil to become long radio waves, then AM radio waves, then FM radio waves, then microwaves, then Infra-red (IR), then X-rays, then y-rays. Hence, the electromagnetic spectrum is nothing more than an electron dilated by different magnitudes of relativity. <u>Other particles, such as protons and neutrons, will also have their own spectrums, which may be different or similar to that of the electron.</u>

From Figure 2, we see that if electricity or electrons in an electrical wire tried to move faster, the electrons path would be compressed further, making it coil upon itself again creating secondary coiling or a coiled coil path. Hence it would be further affected by length contraction. As a result, the electron will be observed as different forms of energy. In the figure above, we see that an electron is considered as mass when it has an undilated velocity or Newtonian velocity between 0 and c. If an electron tries to travel faster than this, it enters the energy zone, where the electron path becomes fully compressed and moves as a full primary coil or circle which undergoes secondary coiling or coils upon itself. A particle moving as energy or a secondary coil has an un-dilated velocity or Newtonian velocity range between c and c^2. In this range, the particle now experiences secondary coiling, so the coil now coils upon itself. Figure 3, taken from the McMahon field theory (2010), also explains what happens if an electron tries to move faster than C^2: The secondary coiled or coiled coil path becomes overly dilated, and the length contraction effect becomes so great that the particle now undergoes tertiary coiling- ie it becomes a coiled coil coil. As a result, because of excess coiling the particle becomes undetectable or unidentifiable. These undetectable states are what are known as dark matter and/or dark energy. See figure 3.
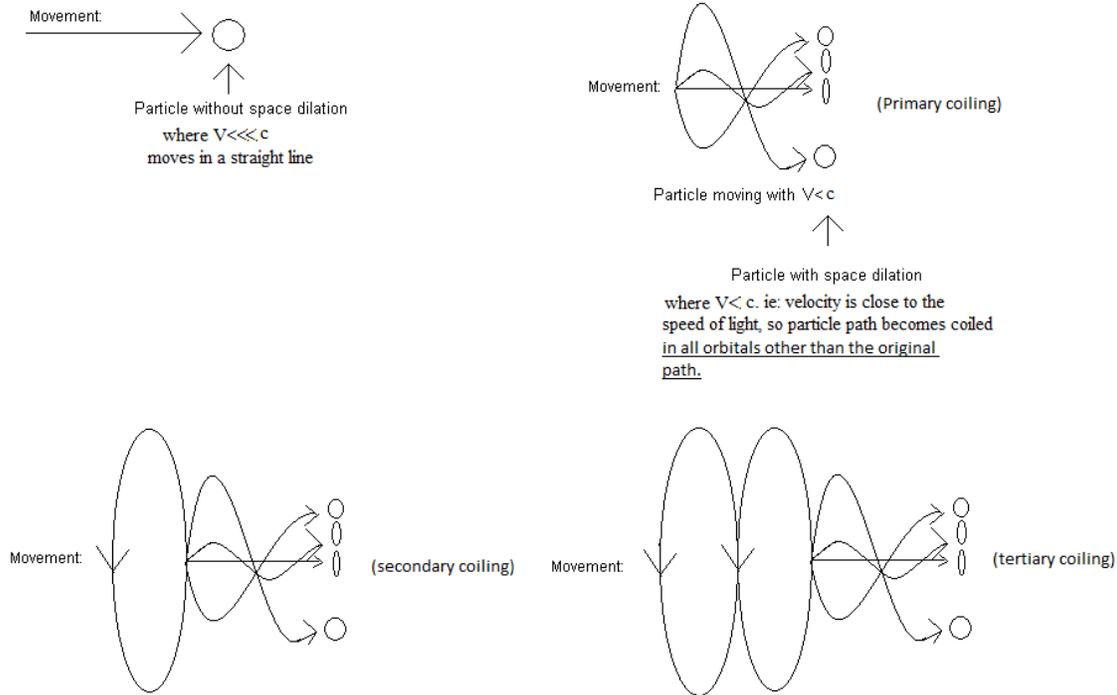
From the paper: **McMahon, C.R. (2013)** *"Fine structure constant solved and new relativity equations– Based on McMahon field theory"*, we are told that Einsteins time dilation and length contraction effects stop occuring and reach their maximum effect at a velocity of 299,792,457.894 m/s. Thus once a particle reaches the speed of light, the mass of the particle system mathematically is the same as at the 299,792,457.894 m/s velocity. Also, if the particle tries to move faster than light, the entire system then coils upon itself, something I call secondary coiling. This prevents us from ever seeing velocities greater than light. This is what energy is- particles moving as coiled coils. When secondary coiling is complete- and tertiary coiling begins- this is the state of Fleiner.

Figure 3: The actual affect Einsteins relativity theory has on the movement of a particle, causing it to first appear as mass during primary coiling, then energy during secondary coiling, and Fleiner during tertiary coiling, during which it becomes dark matter or dark energy. Einstein was unaware of this.

Now, we must consider conventional science of the current day. Conventional oscilloscopes are used for energy only. Therefore, the "waves" we see on oscilloscopes are in fact, the side views of secondary coils and higher degrees of coiling. Once full primary coiling is achieved, the fully compressed primary coil remains as it is, but with more momentum it begins to coil upon itself, which is secondary coiling. Thus, "wavelength" and "frequency" according to the science of this day are measurements from the reference point where a full primary coil forms.

Lets consider McMahon field theory (2010). From the McMahon field theory, we realize that magnetic flux arises due to the length contraction and time dilation of the electron. We observe this flux differently depending on the Newtonian velocity of the electron (ie: the electromagnetic spectrum in figure 2). Keep in mind that relativity prevents observers from measuring the true velocity (Newtonian velocity) of the electron- relativity dilates velocities greater than light back down to the speed of light. Refer to figure 4 below.
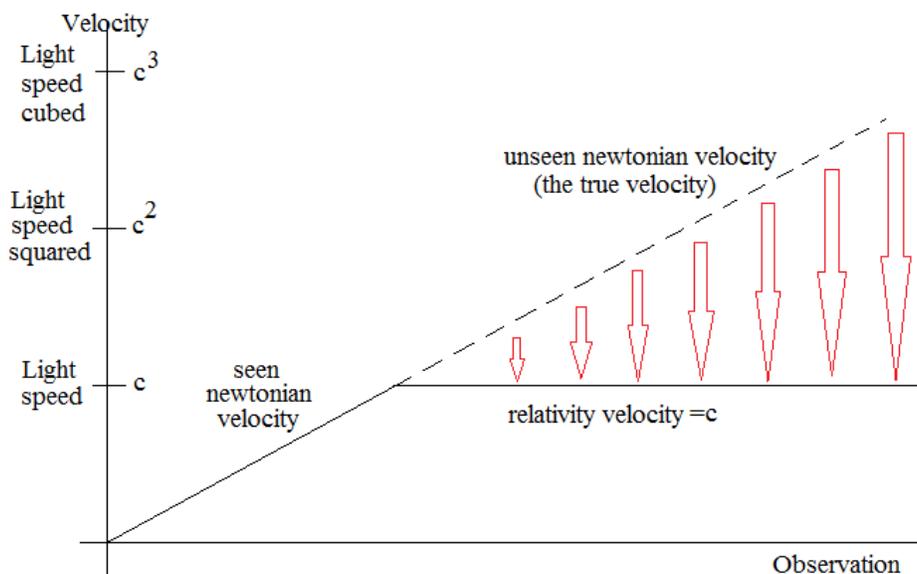
Figure 4: The dilation of the true velocity or Newtonian velocity by relativity. Here, we see that the dotted line represents the true velocity of particles travelling faster than the speed of light, but relativity dilates this velocity down to the speed of light which coils the path of the particle, so observers don't ever see particles travelling faster than light. The degree of velocity dilation is represented by the red arrows. Hence, the solid lines represent that which is seen, but the dotted line, which is the true velocity above light, is unseen due to dilation by relativity.

Now, figures 1 and 3 depict the length contraction effect on the electron, but the length contraction effect occurs simultaneously with the time dilation effect, which causes the electron to exist in multiple places along-side itself at the same time. As a result, as a particle approaches the speed of light, the original electron remains in its original linear position, but it also exists tangentially to itself, which rotates around its original self.

From figure 5 in A), we see a stationary electron in a wire. If this electron moves to the other end of the wire at speeds much less than N, or C for us on Earth, the particle obeys the laws of Newtonian Physics. In B), we see our electron now moves through the wire with a speed of c, so as discussed earlier it undergoes full primary coiling, which results in the appearance of a magnetic field (the magnetic field is the primary coiling) so it obeys the laws of relativity. From Einstein, when the electron moves at a speed where V=c, t'= undefined (time dilation = undefined) and s'= 0 (length compressed to zero). This means that to us, the particle no longer experiences time as in Newtonian physics, and now moves as a full primary coil or circle which propagates along with a speed equal to c. Because t'=undefined, the electron is able to be in more than one place at a time. Because s'=0, the particle is seen to move as a full primary coil or circle, which moves along the wire, always with a relative speed equal to c. this means that the electron is both inside the wire, and orbiting around the wire in multiple orbits multiple distances from the wire at the same time.

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These "ghost or flux particles" which are all one particle that exist in different places at the same time, are responsible for the strange observations and theories made in quantum physics. These theories arise from the fact that ghost particles appear in their experiments involving high speed particles, such as the double slit experiment, and physicists cannot explain what they observe.
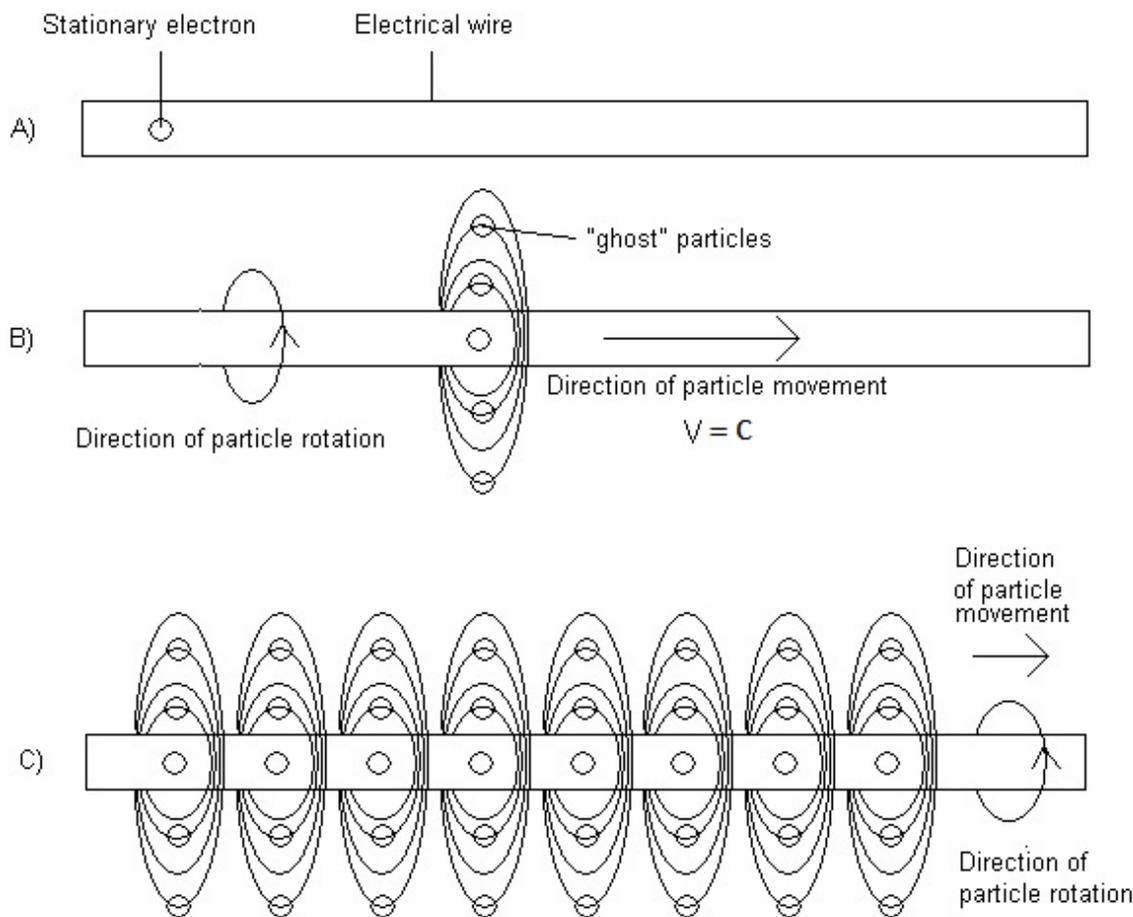

Figure 5: In A), we see a stationary electron in a wire. If this electron moves through the wire at speeds far below c, then the particle simply moves in a straight line through the wire, and no magnetic field is observed.
In B), our electron is now moving at c, so space dilation is occurring, causing the electron to now move as a circle (full primary coil) rather than in a straight line. As a result, the entire primary coil is always seen to move at a relative speed of c. However, the particle is experiencing maximum time dilation, t'=undefined. As a result, relative to us as stationary observers, the electron is in more than one place at the same time. In fact, the electron is both inside the wire, and orbiting around it in multiple orbital positions at the same time. As a result, we observe a magnetic field around the wire, which is just the electron orbiting around the outside of the wire. This is explained in section II table 1 of the McMahon field theory. When a particle is seen in more than one place at the same time, I call this a ghost or flux particle.
In C), the situation described in B) is exactly what is observed when electricity moves through an electrical wire. Note that conventional current moves in the opposite direction to electron flow.

From figure 5, we see that the original moving electrons we observe as electricity still exist inside the wire, but the length contraction and time dilation effects allow these

electrons to simultaneously exist tangentially to their direction of movement outside the wire.

Before a particle reaches the speed of light, it exhibits time dilation and length contraction effects. However, once it comes close to the speed of light, (v= 299,792,457.893735 m/s) or tries to move faster, the time dilation effect remains constant. Because of this, the particle velocity appears to remain constant at v = c or 299,792,458 m/s, while it continues to experience length contraction.

Now, I will begin explaining about the illusion of the expansion of the cosmos/universe.

Mis-interpreted expansion data:

In this paper, I postulate that the redshift seen from stars far from Earth is due to differences in the velocity limit of light in regions far from Earth and to gravitational red and blue shifting, not from the expansion of space. Allow me to depict this. First, considering McMahon field theory (2010), Lets consider figure 6 below.
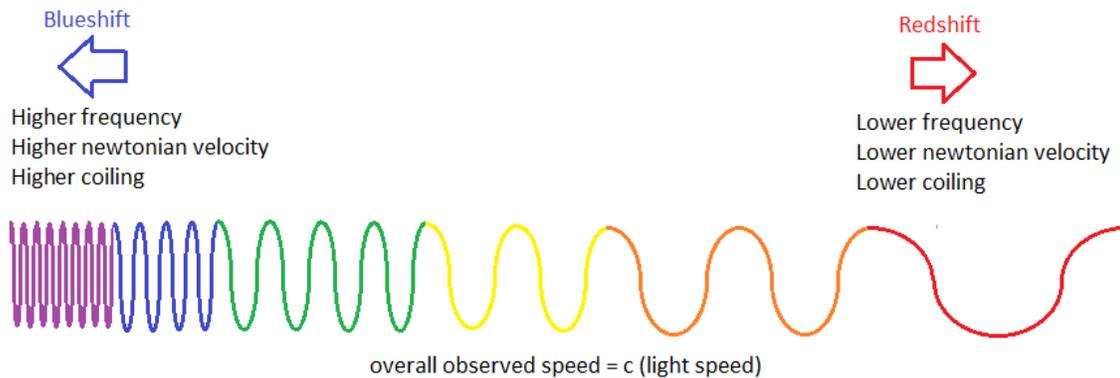

Figure 6: The effect red or blue shifting has on the amount of secondary coiling, hence frequency. (Secondary coiling is a coiled coil, as in figure 3.)

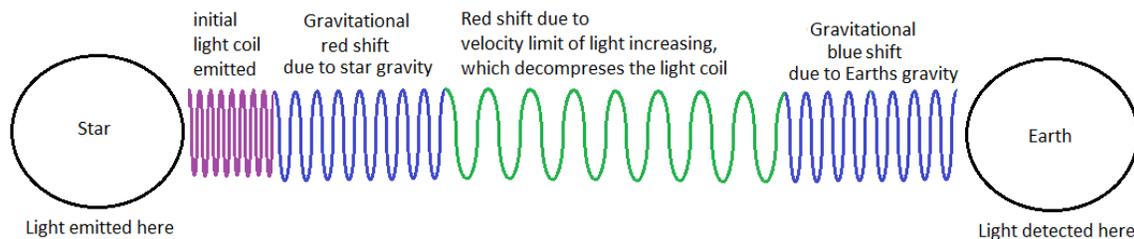**Using figure 6 to depict red and blue shifts, we arrive at figure 7 below:**

Figure 7: The effect red or blue shifting has on the observed frequency (or degree of secondary coiling) of light. This figure assumes that the star and earth are stationary relative to each other, but if they were not, more red and blue shifting would occur. Ie: if the star was moving away relative to the Earth, more red shifting would be observed, and if the star was moving toward the Earth, more blue shifting would be observed. Note that in this image, the green section assumes that the observed velocity limit of light increases as the light approaches Earth, however it may also decrease or remain unchanged.

From figure 7, if we assume that the star relative to the Earth is stationary, then we see that:

If the degree of the sum of the red shifts is greater than the degree of the sum of the blue shifts, then an overall red shift is observed.

Ie: considering figure 7, we see that: If the gravitational red shift due to the star gravity + red shift due to the velocity limit of light increasing > than the degree of blue shift due to Earth's gravity, then a red shift is observed!

Further, if scientists can calculate accurately the degree of the gravitational red and blue shifts from the star and Earth accurately, then any other red or blue shifts will be due to two causes:

Cause 1: Red or blue shift due to star moving away or towards Earth relative to the Earth (currently accepted cause)
Cause 2: Red or blue shift due to difference in light velocity limit between star and Earth (currently ignored cause)

Since it is possible that Cause 2 is a reality, we cannot ignore it. Hence it is possible that indeed the velocity limit of light varies throughout space, or the cosmos or universe. It may appear constant for us here on Earth at a set value, but it may also appear constant on another planet in another solar system at a different value. Thus, if cause 2 is occurring, then space, the cosmos or universe may not be expanding at all, but may be stable. (If cause 2 is occurring, this would make Einsteins cosmological constant and general relativity theory redundant).

From Wikipedia (2013) "Redshift", we are told that the equation for a shift in observed wavelength, given that the wavelength source is moving toward or away from the observer, is:

$$1 + z = \left[1 + \frac{v}{c} \right] \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}}$$

.... equation (1

Where v = the relative velocity between the source emitting the wavelength and the observer. (Units = m/s)

$$z = \frac{\lambda_{observed} - \lambda_{emitted}}{\lambda_{emitted}}$$

λ = wavelength. Units = Metres

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c = the speed of light = 299,792,458. Units = (m/s).

Note: if z is negative = Blueshift, if z is positive = Redshift.

From this definition of z, equation 1 becomes:

$$1 + \frac{\lambda_{observed} - \lambda_{emitted}}{\lambda_{emitted}} = \left[1 + \frac{v}{c}\right] \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}} = 1 + \frac{\lambda_{observed}}{\lambda_{emitted}} - \frac{\lambda_{emitted}}{\lambda_{emitted}}$$

$$1 + \frac{\lambda_{observed} - \lambda_{emitted}}{\lambda_{emitted}} = \left[1 + \frac{v}{c}\right] \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}} = 1 + \frac{\lambda_{observed}}{\lambda_{emitted}} - 1$$

$$1 + \frac{\lambda_{observed} - \lambda_{emitted}}{\lambda_{emitted}} = \left[1 + \frac{v}{c}\right] \frac{1}{\sqrt{1 - \frac{v^2}{c^2}}} = \frac{\lambda_{observed}}{\lambda_{emitted}} \qquad \ldots\ldots\ldots \text{equation (2}$$

From the paper "**McMahon, C.R. (2013)** "*Redshift and Blueshift- effect from the McMahon equations*". The general science journal, we are shown how this equation relates to the true velocity or Newtonian velocity of light as in figure 4, ie:

$$1 + \frac{\lambda_{observed} - \lambda_{emitted}}{\lambda_{emitted}} = \frac{(V_{n_1} - c)}{(V_{n_2} - c)} = \frac{f_{emitted}}{f_{observed}} = \frac{\lambda_{observed}}{\lambda_{emitted}} \qquad \ldots\ldots \text{equation (3}$$

Where: V_{n_1} = unseen Newtonian velocity associated with emitted wavelength.
V_{n_2} = unseen Newtonian velocity associated with observed wavelength.

From this, considering the possibility of Cause 2, then to simplify things, if gravitational red and blue shifts are ignored or don't apply, and the emitting source is stationary relative to the detector, then any detected red or blue shift would be due to differences in light velocity between the region where the light was originally emitted, and where the light is finally detected. Thus, equation 3 would become:

$$1 + \frac{\lambda_{observed} - \lambda_{emitted}}{\lambda_{emitted}} = \frac{(V_{n_1} - C_1)}{(V_{n_2} - C_2)} = \frac{f_{emitted}}{f_{observed}} = \frac{\lambda_{observed}}{\lambda_{emitted}} \qquad \ldots\ldots \text{equation (4}$$

Where: V_{n_1} = unseen Newtonian velocity associated with emitted wavelength.
V_{n_2} = unseen Newtonian velocity associated with observed wavelength.
C_1 = observed velocity of light in vicinity of emitter.
C_2 = observed velocity of light in vicinity of detector.

Also, we see that if:

$$\frac{(V_{n_1}- C_1)}{(V_{n_2}- C_2)} < 1, = \text{blueshift}$$

$$\frac{(V_{n_1}- C_1)}{(V_{n_2}- C_2)} > 1, = \text{redshift}$$

It is interesting to note that if the universe is expanding at an accelerated rate the further you move away from Earth, then the universe cannot be infinite, and must have a boundary which is expanding also, which could be described by the equation: force = mass x acceleration. This is because it appears that the masses of stars are moving away from Earth faster the further that star is away from Earth. Since this force is causing movement that is increasing the displacement between masses like stars in the universe, we can say the boundary of the universe is somehow doing work, as work = force x displacement, which requires an energy input. If the universe has a boundary then it must be considered as a closed system, and closed systems don't gain (or create) energy from external sources, so the universe would not have the energy it needs to expand in the first place.

Thus, a more logical deduction would be that the universe is in fact, infinite, thus would have no boundary, thus is not a closed system, thus it may be able to create energy under the right conditions so that an event such as the big bang has the possibility of occurring, permitting existence to exist. If energy, matter and space cannot be created under any special conditions (as with current thermodynamic theory), then an event such as the big bang has no possibility of occurrence.

Another consideration:

We must also consider the fact that light emitted by stars further away will be red shifted more as it passes other stars and planets, which would increase the amount of red shift observed. In other words, stars further away will naturally appear more red shifted, because the light they emit must pass by more stars and planets (gravitational fields) before they reaches us, so such emitted light experiences more gravitational red shifting compared to stars closer to us. Refer to figure 8 below:
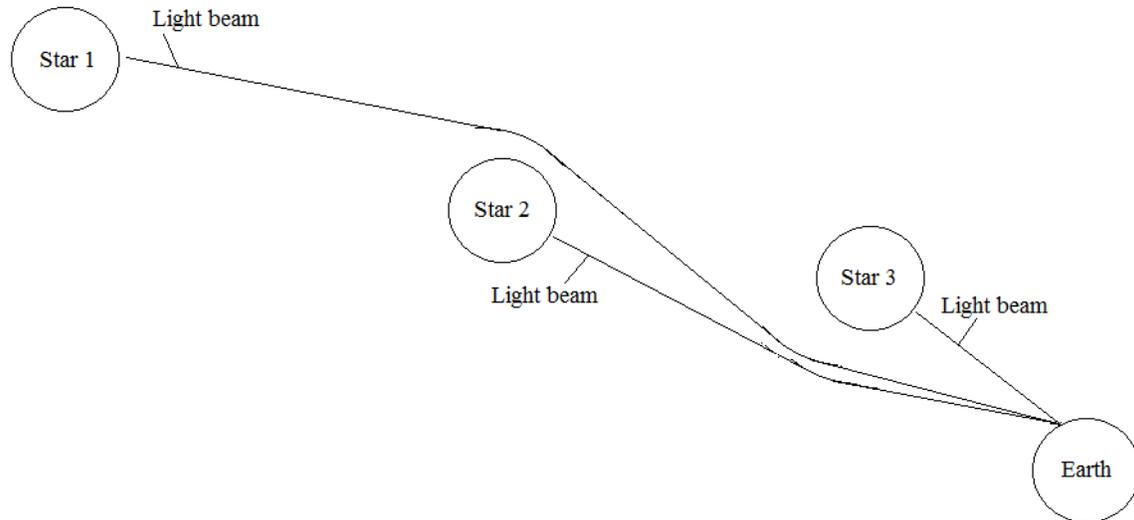
Figure 8: The greater the distance a Star is from Earth, the more redshift we expect to observe. For simplicity in this scenario, let us assume that stars 1, 2 and 3 have the same gravitational strength. Here, we see that Star 1, which is furthest from Earth, has its light beam gravitationally deflected the most before it reaches Earth, thus experiences more gravitational red shift than stars 2 and 3. Star 2's light beam experiences more gravitational deflection than star 3's light beam, thus more gravitational redshift than star 3. Star 3, the closest to Earth, appears to be the least red shifted. Again, this aids in the illusion of an expanding universe.

References:

Einstein, A. (1905) *Does the inertia of a body depend upon its energy content?* Annalen der Physik. **18**:639.

Einstein,A. (1905) *On the electrodynamics of moving bodies.* June 30, 1905. Annalen der Physik. **322** (10): 891–921

McMahon, C.R. (2010) *"McMahon field theory: Theoretical unification of relativity and quantum physics, thus methods to generate gravity and time."* The general science Journal.

McMahon, C.R. (2013) *"Fine structure constant solved and new relativity equations– Based on McMahon field theory".* The general science journal.

McMahon, C.R. (2013) *"Redshift and Blueshift- effect from the McMahon equations".* The general science journal.

McMahon, C.R. (2013) *"Review of Einsteins E=Mc^2 papers- Einsteins own validation of the McMahon field theory"* The general science journal.

McMahon, C.R. (2013) *"The McMahon equations"* The general science Journal.

McMahon, C.R. (2015) *"Electron velocity through a conductor".* The general science journal.

Wikipedia (2013) *Accelerating universe.* Link: http://en.wikipedia.org/wiki/Accelerating_universe Link last accessed 18th January, 2014.

Wikipedia (2013) *Redshift.* Link: http://en.wikipedia.org/wiki/Redshift Link last accessed 4th December, 2013.