
Dark Matter And Dark Energy Paradox Essay

短論暗物質及暗能量的詭謎

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Everest Obscured by Active Dark Matter and Dark Energy
Is this the image seen by the eyes before our brain?



Everest Mirage by Matter and Dark Matter Combined
This too?



Forbidden Zone Occupied By Active Dark Matter and Dark Energy

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Abstract

Dark matter and dark energy can not be invisible, if existed. Wouldn't they have to obey the same fundamental principles? There are ordinary particles invisible to us, but we can detect the reactions of it's surroundings. Physical matter, dark or not, has to occupy space and prevent other matter from taking the same location. Any activity of dark matter/energy would disturb the ordinary matter/energy in it's vicinity and vice versa. Isn't it possible to observe ordinary galaxies bounced off from the space occupied by invisible dark matter? Yet, there is no logic that dark matter/energy would not be on Earth around us like ordinary matter/energy. By looking at the ordinary matter afar or at hand, wouldn't it reflect the hiding of dark matter and dark energy?

On the other hand, isn't it meaningless if dark matter/energy can occupy the same space of ordinary matter/energy without interactions? Only space can occupy the same location with matter and energy without interactions, isn't it?

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1 Introduction

As hypothesized, dark matter neither emits nor absorbs light or other electromagnetic radiation at any significant level. However, there are magnetic fields, particles activities, particle waves, radiations of all frequencies, surface interaction, temperature or pressure variations, not to mention the macro activities of supernova. How could physical matter be not reactant to the fundamentals of the universe? Besides, energy can not exist by itself. It need to reside in matter, matter has to reside in space. Then, dark matter[2] would occupy over many times more space then ordinary space.

Dark matter and dark energy can not be invisible, if existed. Wouldn't they have to obey the same fundamental principles? There are ordinary particles invisible to us, but we can detect the reactions of it's surroundings. Physical matter, dark or not, has to occupy space and prevent other matter from taking the same location. Any activity of dark matter/energy would disturb the ordinary matter/energy in it's vicinity and vice versa. Isn't it possible to observe ordinary galaxies bounced off from the space occupied by invisible dark matter? Yet, there is no logic that dark matter/energy would not be on Earth around us like ordinary matter/energy. By looking at the ordinary matter afar or at hand, wouldn't it reflect the hiding of dark matter and dark energy?

On the other hand, isn't it meaningless if dark matter/energy can occupy the same space of ordinary matter/energy without interactions? Only space can occupy the same location with matter and energy without interactions, isn't it?

I believe dark matter/energy mushroomed from the confusions of cosmic redshift. It is created to explain patch up the run-away expansion of the universe. However, big bang and expanding universe is the illusion of dominating cosmic redshift observed.

2 Illusion of Expanding Universe Caused By Redshift

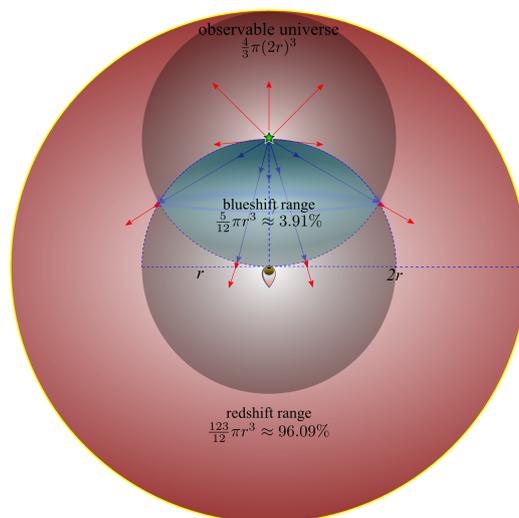
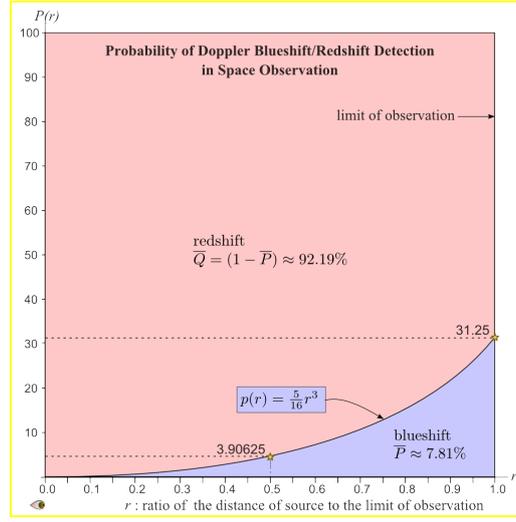


Figure 1: Dominating Cosmic Radiation Doppler Redshift



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Figure 2: Probability Distribution of Doppler Blueshift Detection in Space

Probability of Doppler Blueshift Detection at Location r , ($0 \leq r \leq 1$)

Blueshift Detection	Probability Function $p(r)$	Population Mean (%)	Mode (%)	Range (%)
Space	$\frac{5}{16} r^3$	7.81	31.25	0.00 – 31.25
Surface	$\left(\frac{2\pi}{3} - \frac{\sqrt{3}}{2}\right) \frac{r^2}{\pi}$	13.04	39.10	0.00 – 39.10
Linear	$\frac{r}{2}$	25.00	50.00	0.00 – 50.00

Table 1: Blueshift Probability Functions

Probability of Doppler Redshift Detection at location r , ($0 \leq r \leq 1$)

Redshift Detection	Probability Function $1 - p(r)$	Population Mean (%)	Mode (%)	Range (%)
Space	$1 - \frac{5}{16} r^3$	92.19	100	68.75 – 100
Surface	$1 - \left(\frac{2\pi}{3} - \frac{\sqrt{3}}{2}\right) \frac{r^2}{\pi}$	86.96	100	60.90 – 100
Linear	$1 - \frac{r}{2}$	75.00	100	50.00 – 100

Table 2: Redshift Probability Functions

$$r = \frac{\text{distance of observation}}{\text{limit of observation}} = \frac{\text{distance of object}}{\text{observable universe}}$$

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Firstly, Doppler redshift of radiations[3] is dominating in all observations (over 92 % in cosmic redshift). Doppler effect is independent of the location of it's source. It is function of distance changing (speed). In other words, redshift caused by receding of an object is Doppler effect. It is the effect of changing distance and it is limited by the top speed of the object. Faster receding object at any location, near or afar, will have higher Doppler redshift. Slower receding object will have lower Doppler redshift irrelevant to it's location. The same principle applies to Doppler blueshift.

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Secondly, redshift is also caused by frequency loss over distance (other than change in distance). All signals fade over distance. Radiation detected is not a single wavelet, but a very long stream of wavelets. Here, wavelet

is defined as single complete cycle of oscillation (period). The size of light wavelet is brightness, the rate of arrival (frequency, pulsation) is color. The size of sound wavelet is loudness, the rate of arrival (frequency) is pitch. In music, you hear middle C if your ears detected 261.63 sound wavelets within one second.

Nature does not create perfect wavelet and identical wavelets. Weak wavelets will not survive in long journey. Lost wavelets will stretch frequency and cause redshift, Tyndall effect[8]. Fading over distance is fundamental. Emitted radiation of an object will radiate into its environment and thin out. It is exponentially proportional to the distance of source object. It can create redshift effect z -value greater than one with no limit. However, it is not the light speed receding of Doppler effect. I believe this is the cause of interpretation of Hubble's Law,[5] and created the illusion of run-away universe.

Additionally, Doppler blueshift will not be detected if frequency loss overwhelmed Doppler effect. It also reduce the possibility of Doppler blueshift detection exponentially over distance. High frequency radiation stands out from low frequency background. It let us detect the location of source easier, visual range can be seen with naked eyes. Low frequency, radiation on the other hand, is harder to pinpoint the location. It is the same phenomenon of low frequency music is non-directional to our ears. I believe radiation, over space, can continue to stretch below visual and infrared detection, the source would merged into the background. The question is, can we measure redshift of below-infrared or Cosmic Background Radiation (CBR) and locate the source?

Thirdly, energy level change of source also can cause stretching or shrinking of frequency and strength (amplitude) to change. We assume it does not significantly affect radiations, since original emitting frequency and strength of cosmic source are assumption.

Fourthly, This nature of greater redshift over distance fits the distribution of NASA/IPAC Extragalactic Database (NED).[7] I would say the z -value detected by NED is redshift caused by combined effects of fading and changing in distance, or signal loss and Doppler effect. However, only under 1.1% of the objects with redshifts are detected, Table 3. Can we say the total objects surveyed is more than a drop of ocean water comparing to the size of cosmos? Besides, the period of sky survey is hardly a blink of our eyes. I doubt that it has any significance of hastening the fate of the universe and its past.

Objects found in NED's list, November 2, 2014		
redshift objects ($z > 0$)	5,166,694	1.097%
blueshift objects ($z < 0$)	9,334	0.002%
marginal objects ($z = 0$)	2,939	0.001%
Total objects with redshifts	5,178,967	1.100%
Total objects without redshifts	465,814,004	98.900%
Total objects found	470,992,971	100.000%

Table 3: NASA/IPAC Extragalactic Database (NED)

Fanally, Milky Way and its neighboring galaxies are located in remote region of the universe. However, we don't detect it is receding. Neither the inner space of Milky Way or Solar System is expanding. There is no logical and scientific ground to make exception of inner space, Milky Way and its neighboring galaxies. Space

70 is the environment of all objects. Expansion of space will cause all objects to react. Galaxies have to expand when outside had expanded. It also cause the temperature of the surrounding to drop. Solar system has to expand when galaxy expanded, and temperature drop of it's surrounding. Then, planets have to react to the change. The reaction will continue down to fundamental level. It is universal principle of outside pressure change we all can observe.

75 Suppose there were alien observers watching from opposite galaxies with redshifts ≥ 1 detected by us. They have to detect the identical redshift of Milky Way. Do you think they would conclude that Milky Way is receding past the speed of light in expanding space? Anyway, what if the hypothesized gravitational waves and spacetime curvature got in the way. Wouldn't redshift merely a mirage, or spacetime? Isn't it paradoxical entanglement?

80 To me, redshift distribution of NASA/IPAC Extragalactic Database does not suggest more than it's face value, *i.e.* estimate of distance and change in distance of cosmic object. However it has been misinterpreted to be the evidence of expanding universe, big-bang and further mind-boggling confusions.

3 Disprove Expanding Universe

In order for space to expand these assumptions ought to be true:

- 85
1. Space can expand and there is room for it to expand.
 2. Space can expand faster than light-speed.
 3. Space can carry, or it has friction to carry all structures as large as galaxies.
 4. Expanding space does not impose accelerating stress on riding structures.

Do you believe any of these can be proven? Still, none of this matters if redshift was not over (even mis)
90 interpreted, isn't? And, further controversial interpretations can be avoided.

Radiation, blinking light, sound, wave, and all oscillations are pulsations. So is the pulsation of quasar. The Doppler effect of pulsation from a quasar has to coincide with Doppler effect of radiation. It is also true that Doppler effects of sight and sound of a moving singer will coincide. And it is universal.

However, we have observed constant rate of pules from high-redshifted quasars. The study of astronomer
95 Mike Hawkins[4] from the Royal Observatory in Edinburgh has found that quasars give off light pulses at the same rate regardless of their distance from the Earth.¹

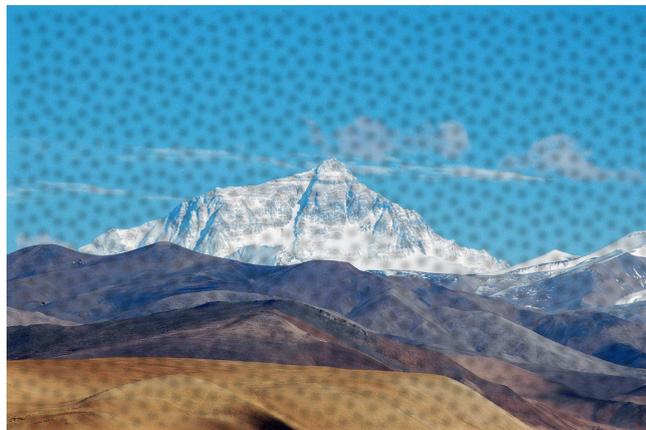
Pules of quasar is intensive radiation in short burst. It will not suffer frequency loss over distance as much. It tells better truth about the Doppler effect. To me, quasars are broadcasting strong and clear message that they are not leaving. Doppler redshift observed is the normal phenomenon of spiral motion of cosmic objects,

¹Quasars Don't Show Time Dilation Mystifies Astronomers, Lisa Zyga, [PhysOrg.com](#), April 09, 2010.[9]

100 4 Ordinary VS. Dark

Dark matter and dark energy, if existed, would have to interact with matter directly or indirectly. There are ordinary particles invisible to us, but we can detect the reactions of it's surroundings. There is no reason matter and energy, dark or ordinary, would not interact. Many incomprehensible paradoxes are created by dark matter and dark energy:

- 105 • Dark matter has to start from fundamental elements. Even invisible, it has to have mass, surface, size, structure, and carrying energy. Hence, interactions. How could it be matter without physical properties and does not obey the fundamental principles of matter?
- There are magnetic fields, particles activities, particle waves, radiations of all frequencies, surface interaction, temperature or pressure variations, not to mention the macro activities of supernova. How could 110 physical matter be not reactant to the fundamentals of the universe? Even insignificance level of reaction can be amplified by the leverage of it's abundance and scale, isn't it?
- Universe does not limit the freedom of matter and energy. There is no logics that dark matter and dark energy would not be on Earth. Shouldn't they be in the laboratories?
- Is Figure 3 the image of Everest seen by our eyes before the brain constructs a clear picture?



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Figure 3: Everest Obscured by Active Dark Matter and Dark Energy
Mount-Everest by Joe Hastings. [6]

- Could waves of radiations be interfered by dark matter and dark energy? Do our eyes see the mirage, Figure 4, before our brain?



Figure 4: Everest Mirage by Matter and Dark Matter Combined
Mount-Everest by Joe Hastings. [6]

- If dark matter and dark energy can not be on Earth, there must be forces keeping them out. Then, isn't it interactions among ordinary and dark?
- How could such abundance of dark matter and dark energy would not build structures large enough to reveal themselves?
- Dark matter and dark energy would have to occupy space. It would keep ordinary matter and energy away from it's location. Any activity of dark matter and dark energy has to disturb the ordinary matter in it's vicinity. On the other hand, matter would not allow dark matter to come to it's location of space.

Figure 5.



Figure 5: Forbidden Zone Occupied By Active Dark Matter and Dark Energy

On the other hand, isn't it meaningless if dark matter and dark energy can occupy the same space of ordinary matter and energy without interactions?

135 It is hard to subscribe dark matter and dark energy can be independent from reacting with ordinary uni-
 verse. Don't they have to fight for the occupancy of space to exist? It is as hard to believe such major portion
 of the universe does not comply to the fundamentals of real world around us. To me, dark matter and dark
 energy are fictitious patch-ups mushroomed from the confusion of expanding universe which is an illusion
 of overwhelm cosmic redshift observation. Nevertheless, if redshift was not over (even mis) interpreted, all
 140 further controversial interpretations can be avoided. Time and effort of scientists is too valuable isn't it?

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