

# Real Reason of Red-Shift

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**Abstract:** Over a century, we know that all the planets, stars & all the bodies in the universe are moving away from us by observing its RED-SHIFT of its light through spectroscopy. But I say this red-shift is not due to that body moving away from us, actually this red-shift was due to gravitational force of other objects that present in its path of the light. By this prediction I concluded that our universe is not expanding, actually it was static. And also we don't have big-bang origin.

**Keywords:** RED-SHIFT, planets, stars & all the bodies.

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## 1. INTRODUCTION

If we observe any star on the outer space, through spectroscopy, we get red shift in their spectrum. It is due to stars are moving away from us, so its light's wave get stretched therefore wavelength was increased so that we get the red-shift in their spectrum (red light has high wave length).but not exactly.

## 2. PREDICTION BY GENERAL THEORY OF RELATIVITY

Actually LIGHT travels through the space. Just imagine the space is flat (uniform), when no object in that space. But if some object in there, that space was warped by that mass. This warping was depending upon on that mass of that body. If light travels through that warp region then its beam gets curved.

## 3. VELOCITY OF LIGHT IS CONSTANT

We know that when one object travels in straight line it has constant velocity, then after a couple of time suddenly its path was deviated by any other force, definitely its velocity was changed.

Likewise when light from the star travelling in straight line, then its path was deviated by gravitational force of the object that present in its path, it means that light travel in warping region of space around that mass object, then that light's velocity was changed.

At that time gravitational attraction between light and that mass object is equal to centripetal acceleration or deceleration of the light.

Where,

$G_p$  be the gravitational constant of that mass object,

$M_p$  be the mass of that mass object,

$M_l$  be the mass of light beam, ( $m = \frac{hv}{c^2}$ )

$r$  be the distance between light beam and mass object,

$\Delta v$  be the change in velocity due to gravity,

$$\frac{G_p [m_p \cdot m_l]}{r^2} = \frac{m_l \Delta v^2}{r}$$
$$\Delta v = \frac{\sqrt{(m_p \times G_p)}}{\sqrt{r}}$$

$$\Delta v \propto \frac{1}{\sqrt{r}}$$

So, From the above equation The amount of change in velocity due to gravity is inversely proportional to square root of distance between light beam and that mass object .

According to the general theory of relativity velocity of light was constant. But in this case actually light use some energy E to balance its constant velocity. It means light loos some energy E to balance its constant velocity ( $3 \times 10^8 \text{ ms}^{-1}$ ).

Where , $v_f$  be the velocity of light after it comes under influence of gravitational field,

But, According to the general theory of relativity this  $v_f$  needs to become C ( $C=3 \times 10^8 \text{ ms}^{-1}$ )

$$v_f \rightarrow C$$

it means ,it do some x amount of work to attain C.

$$v_f + x = C$$

Here,  $x = C - v_f$

For this correction in velocity (x term ) to maintain its constant velocity , light need to spent some energy E.

#### 4. REAL REASON FOR RED-SHIFT

In cosmos every ware there was mass. Light from the distant star travels through that warp region of space around this all mass then light loos some energy E. Therefore its wavelength  $\lambda$  was increased.

Red colour has high wavelength. So if we observe that light through spectroscope we get the RED-SHIFT.

$$E \propto \frac{1}{\lambda}$$

Energy is inversely proportional to wavelength. Therefore if light loss energy E by gravity to maintain its constant velocity gradually its wavelength  $\lambda$  also increased.

So, The red-shift of the star was due to the presence of the gravitational force of the mass that present in that path of the light not due to that star was moving away from us.

#### 5. DARK ENERGY

Last 3 decade we know about dark energy. If we measure the amount of red-shift of the star for various time interval, we get more amount of red-shift when time increasing . we assume this was due to expansion of universe was accelerating due to presence of anti gravity substance something we called DARK ENERGY.

But actually this increasing amount of red-shift per time is may be due to warping of space by every mass in the universe was increasing.

Then this warping was increasing then, when light from distant star travels through that region then light loses more and more energy so wavelength was also increasing in higher value ,so we get more amount of red-shift per time .May be dark energy is nothing but something that lowering energy of light.

#### 6. VERIFICATION OF THIS THEORY

We are well known that our earth is moving around the sun. Okay for this verification we need to take two set of reading at different time.

##### 1<sup>st</sup> READING

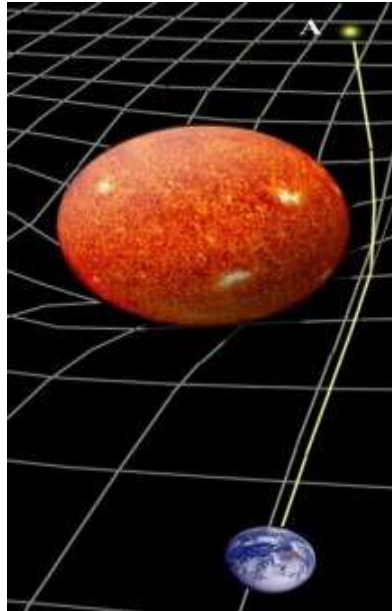
Observe the spectrum of distant star when our sun is in that star light's path.

##### 2<sup>nd</sup> READING

After the couple of month, our earth rotates our sun and go to other side of our earth's orbits. Then we observe that same star's spectrum. In this reading our sun is not in that light's path.

So Hear , if theory was correct , 1<sup>st</sup> reading gives more red-shift then 2<sup>nd</sup> reading, because that light from distant star lose some energy E due to presence of our sun's gravitational field in its light path . So it's wavelength  $\lambda$  was increased (Red-colour has high wavelength),So it give more red-shift then 2<sup>nd</sup> reading .

In our cosmos every were we see there is the mass, Each mass has their own gravitational field around that mass. When light from star travel through space and this light was disturb by each and every mass , so light lose more & more energy E .so it give red-shift to us , when we look that light through spectroscope .This is the real reason for red-shift .



## 7. CONCLUSION

By this theory I say following conclusion:

- 1) RED-SHIFT of object was due to gravity not the object is moving away from us,
- 2) Our universe is not expanding,
- 3) Dark energy is nothing but something that increases the warping of space by mass.
- 4) We don't have big-bang origin & so on.

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