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## **Conversant for the Prisoners of Earth (2014)**

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### **Abstract**

A study explained the nature of astronomical objects and their movement in an orbit of momentum. Not only some astronomical objects have been identified in a simpler form but also provided their characteristics. On the basis of this analysis and interpretation of estimated phenomena and the visibility of objects in Universe, the Core concept has been identified to explain the movement in a space and causes that are responsible for universal theorem. The purpose of the study is to provide better understanding of relationship among gravity, distance and time with the support of laws of astrophysics. An assumption was made for a constant factor that (P) is the product of distance covered by the body and gravitational force acting on it. An empirical derivation has been deployed with help of supported standard equations in order to explain the association whereas further research is possible in developing the relation and association of other astrophysics factors or lead the current study towards the theory.

*Keywords: Gravitational Force, Time, Distance, Astronomical Objects, Laws of Physics, Derivation*

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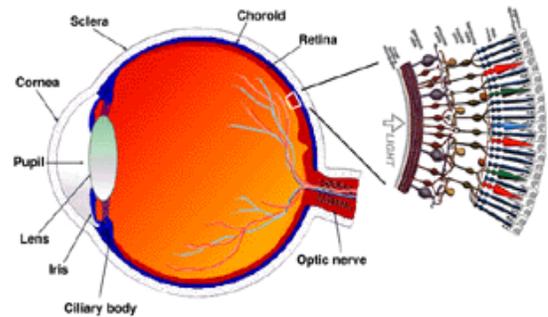
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## 1. Introduction:

What do we observe when we look at the sky in the middle of the night? The easiest way to describe this would be to say that we see several stars, sometimes moon and absolute darkness. Have you ever thought where do stars come from and what is their purpose? Another interesting concept is our observation regarding colors; the colors we can observe and those we cannot observe. A green leaf indicates that it absorbs all colors that come from a beam of light except the green color. Due to reflection of green color, it shows to the retina and ultimately our mind recognizes it as green color. Our retina allows the leaf to be viewed as green as that is the color that reflects light on the leaf. By considering this example for the sky too, we conclude that the color that is reflected back is the color black. Although it can be also taken into consideration that the medium of space does not allow light to be reflected and it is present in absorbing state. For humans, the universe is not treated as estimated item for human philosophy however it contains uncountable objects that do not reflect light so they are invisible to human eye and it is near to impracticable to think about them.

Figure 1.1: Human Eye Retina



As far the nature of universe is concerned, it is quite rational to say that it is indefinable and has a massively complex environmental setting. This includes billions of objects that look like galaxies, asteroids, planets, black holes, solar energies and much more. Prisoners of earth may be the most useless creatures in this universe as many of the secrets of the universe have not been revealed yet whereas it was very difficult to reach the Moon and Red Planet but some unknown spaceships were also observed by astronomical telescope that explained the idea of travelling bodies from one place to other effortlessly that do not belong to earth. To accept the travel logic in space, it is necessary to understand the relation between distance, weight, gravitational force and velocity of the object. Here it was assumed that there is a constant factor that represents the relation among distance covered by the moving body and the intensity of gravitational force. Few standard equations have been used to justify the association between distance and gravity. It was noted

earlier through other supported studies that gravity has an inverse relation with time

## **2. Literature Review**

Several literatures have been reviewed to understand the concept of the current study. Pollack, McKay and Christofferson (1985) attempted to evaluate early solar nebula. It is an experimental design that observed temperature from 10K to 2500K on objects having different densities. A research was useful to develop the research design and outline of the study. Hence methodology differentiated its nature from recent research. Opacity for choosing particles for and experiment was the unique concept has been found in the experiment. Yair, Schurand and Mintz (2003) explained the basic model of thinking journey and build understanding of natural phenomena for new environment. It supported the inventions of new technologies 3D animation and virtual reality to enhance the power of visualization and its multiple programs for spaceship to help and encourage IT students and astronaut with interpretation, pre-observations and comparison to earth. It also discovered the phenomena of astronomy and incorporates the laws of physics.

Beside the core literature, several studies have been reviewed also in order to support the revealed concept and justification of

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spent by the body (Zhang, 2006).

assumption. Barrow (1991) provided a new aspect to modern physics. Research has been conducted on the Theory of Everything and what it explained about the universe. Eight essentials for the Theory of Everything were taken and then elaborated turn by turn have been explained and started with how our beliefs have been formed and traced its origins. It was also explained that how the laws of nature have changed over time that have broken symmetries. The universe and its laws are messy and complicated. To gain in-depth knowledge, the right questions must be asked so that right information can be gathered. The answer lies in mathematical theories and models which explains the physics of the world. But this does not mean that human thought and experience must be ignored. Finally it was concluded with the fact that although the Theory of Everything can rightfully only be described through mathematical calculations, it must encompass the human side as well in order to explain the universe justly.

Heller (2004) critically analyzed Shahn Majids theory. On the basis of experimental design, it was explained that in order to explain the universe with justice, every

theory ever presented should have dual interpretations. Without this, no theory is complete. Hopf algebras has been used for his study and in his profound research, it was compared several theories to other ultimate explanation and then each one of them was described briefly. A study has given us a new interpretation to mathematical astronomy, physics and their relation to the universe and its laws. This significant study has given way to many new interpretations of many age-old theories from ancient times.

Barrow (1995) explained the origin of our likes and sensibilities. It was argued that when human beings experience something, whether it is a painting or music, it invokes instincts that were enabled millions of years ago. Moreover it was explained that there is a deep connection between the universe, its laws and our aesthetic likes. The effect of the universe on our likes and dislikes is so subtle that it can only be felt. Barrow elaborated that millions of years of history of the universe and the constellation is responsible for our perception and attraction towards certain patterns and prints. It was also referred to the laws of Pythagoras and music and their relationship. The conclusion was simple: the implication of the universe is highly connected to the laws

of arts and science. This will change our way of thinking for the way we create and perceive this world and its things.

Grandpierre (2000) conducted this study to explain that the universe acts as a foundation to our consciousness. Beside this, it was explained that the universe and logical nature are deeply connected which in turn forms our beliefs and values. On the other hand, mathematical and physics theories have been used to reinforce that the universe also has an emotional nature. Few theories were supported by models and theorems related to space time quantum, logical validity and infinite and finite existents. This study has given us a new aspect for the universe and its influence on human nature and our perceptions and interpretations regarding the universe and its laws.

Barrow (1998) related cosmology to mathematics and physics in this study with the topic of impossibility. However it was explained that even to the human mind, there are limits to what can be known and discovered after which the realm of the undoable and unreachable exists. This is due to the scientifically proven deficiencies of the human mind. Humans are unable to understand what lies outside their circle of thought. He has referred to the Godel's theorem and Arrow's Impossibility

theorem that depicts that there are many things in this universe that cannot be proven. Many interesting questions have been raised in the study that are related to the universal laws, limit of human mind and their link with laws and physics and arts.

Maxwell (1996) conducted this study in order to validate his theory that each and every experience in this world is related to the laws of physics. It was explained in the study how these theories are evolved and can be traced back in time. The author further stated that although physics is silent on the sensory qualities they are, nonetheless, existent and objective in this universe. This author's study has given us a new view for physics and its influence on the universe and human nature no matter how subtle it may be.

Mueller (2006) conducted this study with the aim of explaining the link between physics and mathematical astronomy. Study has been started with describing the difference between physics and mathematics and their connection with astronomy. Several other theories from Early Roman science, Arabic texts, manuscripts of Ibn Rushd, Aristotle and Hellenistic physics were discussed to further validate his point. A study has given us a new interpretation for mathematically astronomy and physics and

has reshaped the age old theories to better suit to this time and universe.

Janos (2011) explained Ibn sina's outer space kinematics which is an important aspect of the cosmology. He has given basic feature of some of cosmological view and then differentiated between different celestial theories and intellects. It was concluded in the study by explaining the role of outer space souls in causing celestial activity.

Elkins (2008) explained through the research has been done that how human being view forms of art. Six forms of art have been taken for this study, image (work of art), photography, astrophysics, microscopy and physics and has created stories of perception around them. He then tested how each form of art influences its viewer who is both experienced and inexperienced in this field. It was concluded about study of unique structure on how it is viewed and perceived with its relation to the universe.

Bowen (2007) had taken reference from the ancient theories of Hellenistic and Babylonian astrology and answered questions that had risen for astrology. It was also referred to the Greco-Latin science of astronomy and discussed its variations and compared this with the explanation offered by Geminus and related the two. A study is

very significant for the profound understanding of the astrology and cosmology and its impact on other studies for the next 1500 years. A study also provides a better basis of understanding for future studies to be conducted in light of the Ptolemy and Hellenistic context. The union of the science of intellect and reception of horoscopic astrology has given new interpretation for the world.

### **3. Astronomical Objects**

Universe has an extremely wide horizon and it would be true to say that it contains poles as the earth have four poles i.e. east, west, north and south. However it is expanding with time and some scientists have found the universe different in nature and very strange mechanism because it was concluded earlier that space has a medium that never resist anything and have several dimensions and it is not only restricted to three dimensions. It may contain thousands of dimensions and infinite number of objects. The first and the most significant object is known as galaxy. It comprises on space rocks, planets, suns and heat fumes that revolve in a specific movement in a formalize way with a bounded force of Black hole in the middle of galaxy. In fact the reason of formation of galaxy is black hole that allows subjects to move around it with centripetal and

centrifugal force of attraction. Galaxy is considered the most largest object in the universe whereas there are only two galaxies have been seen in the universe but it would not be perfect to say that there are only two galaxies are present in this universe but factually it can be more than million in numbers. The solar system in which earth revolves around the sun with eight more planets is a negligible part of the Milky Way Galaxy. This galaxy is having white color with the observation of circular motion anti clock wise. While watching towards the sky in the night, other elements of Milky Way Galaxy can be seen also that we call stars. So moon revolves around the earth, earth revolves around the sun, sun revolves around to any other object larger than sun and most probably that object may be revolve around the black hole in the center of Galaxy. Yes! This is the game of gravitational force that allows smaller object moves around the larger object having gravitational force more that small object. It was not wrong if it was said that larger object has greater gravitational force.

Another Galaxy has been seen by astronomical telescope is Andromeda Galaxy. This Galaxy is treated the most nearest galaxy from Milky Way Galaxy. Andromeda seems larger than Milky Way

and have a flame orange color with oval shape structure but having same nature of elements with Milky way Galaxy. It was roughly calculated the distance 25 million year travel with the speed of light between earth and Andromeda Galaxy. So as it was mentioned earlier by explaining retina, if we see Andromeda from earth so it would be

the view before 25 millions year. The movement of Andromeda may be different from Milky Way due to the different intensity and gravitational force of Black hole. With the larger in size, it would be quite true to conclude that the black hole of Andromeda is bigger and wider than the Milky Way's black hole.

Figure 3.1: Milky Way and Andromeda Galaxy



A question arises over here that what is the black hole actually and why it is not visible for human eye? Before answering this question, some interpretation regarding with the demolishing of planet should be considered. In this Universe there are varieties of planet with numerous in size, the way of demolish the planet is based on its size i.e. large size planet, medium size Planet and small size planet. It is obvious about demolishing planet that it destroys

when its gravity increases at reach at peak. If the planet is considered as small size planet so it demolishes as a white war. Sun is an example of white war that burns itself and destroys slowly by time. In every second, thousands of kilometers of Sun have been destroyed by explosion of H+ ions and having very high amount of gravity. Second category is the medium size planet that destroys with a massive blast is called Supernova. As it was also observed that supernova is the post condition of Pulsar, it means that supernova destroys with a huge

blast by becoming Pulsar (polar magnetic line having different shining colors). Last category is the large size planet and it destroys to become black hole. Black hole has enormous amount of gravity so it dissolves its mass by itself and eats slowly and gradually due to high amount of gravity and at the end of the day only energy remains with no mass. As a result of this

gigantic circulation of galaxy's objects forms with bounding of force of attraction by gravity of black hole. So it becomes a reason for not a visibility of black hole from human eye. As discussed before regarding with reflection of light, so it may be possible that black hole may have several dimensions and does not able to reflect back the rays of light after striking on it.

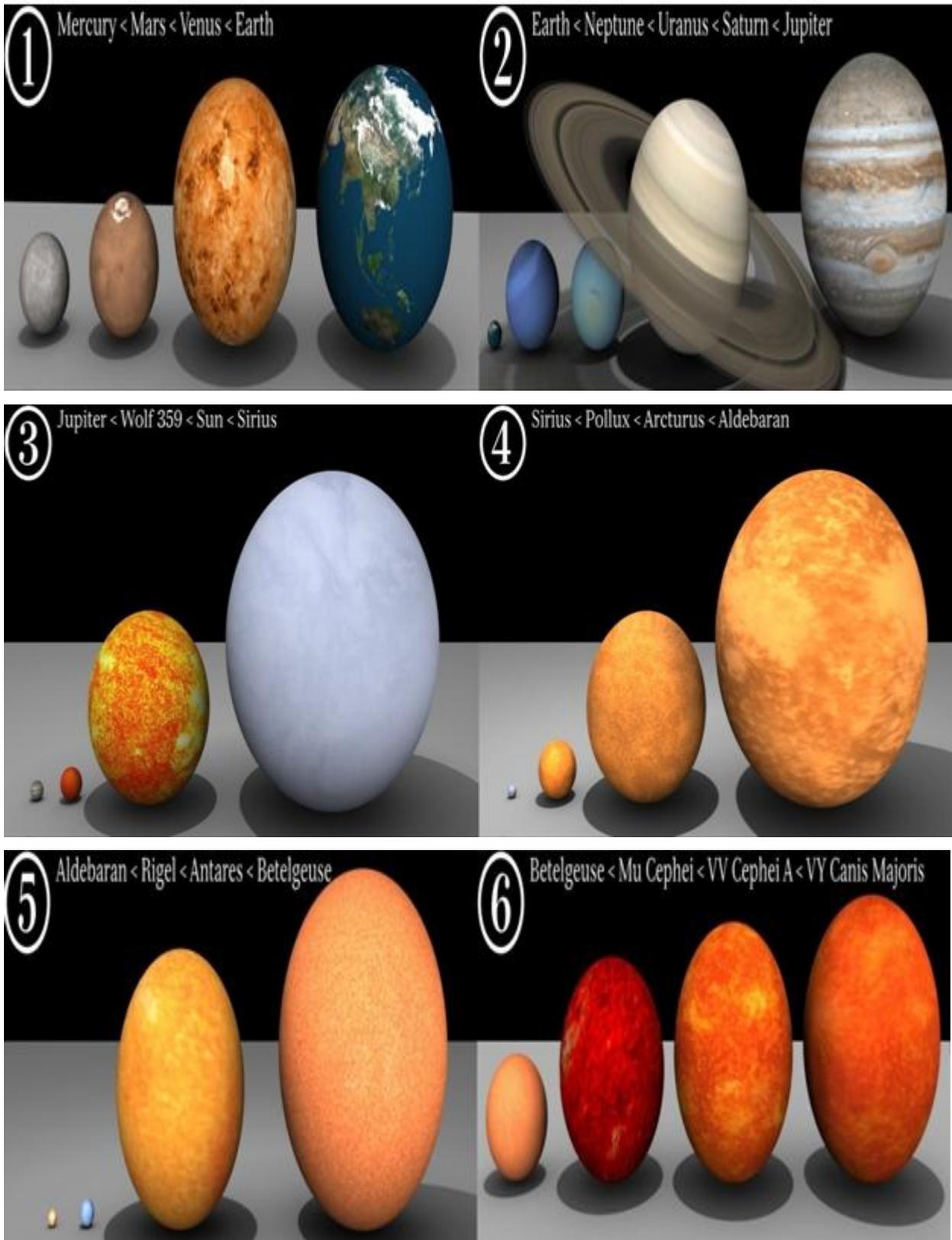
Figure 3.2: Black Hole, Supernova with Pulsar, and White War



Many scientists belonging to Astro-Physics field have been discussing several researches to explain the character of asteroid. They are made up of like ice glacier and travel freely in the space from one place to another. Generally asteroid move with high velocity and make its track path of ice fumes behind it like a tale so it is

called blazing star for laymen. They are considered as negligible objects because of non-measurable large objects present in the Universe. Outer side of the Milky Way galaxy is another story for large planets but there are a lot of large objects are present in Milky Way galaxy that their radius is near to impossible to calculate and have a diameter million times more than earth.

Figure 3.3: Sizes of planets in Milky Way Galaxy



#### 4. Laws' Justification

For considering Astronomy, theories of Newton cannot be neglected and some other scientists have also made attempts in favor of explaining their laws regarding with science of space. Newton worked on nature of matter, space, time and motion. Not only that but he also derived the equation of the movement of planets in solar system. Beside this, he invented calculus in his book "Philosophiae Naturalis Principia Mathematica" and explained the concept of result of the body having horizontal movement more than the gravitational force so it gets break the centripetal force and go away from the earth and its gravity. Hailey also played a vital role in developing the cycle of whether that had been used by picture made through the combination of stars in ancient world. Furthermore he discovered about stars that actually they are not fixed and it was observed by the brightest star in the sky that stars also move as the earth moves and change their places. The cycle of whether is also based on the movement of planet so it should be possible to have more types of whether in a planet that far from sun. Yes! Here Pluto is being considered that it contains maximum numbers of whether and Neptune is having

46 years of day with 46 years of night. It is clear that all planets are moving around the sun with their specific circular rotation and the planet nearer to sun revolves faster than other planets beyond it, explained by Hook's law of elasticity. After finishing the series of researches, Captain James contributed in defining the distance of planets from the sun. By his calculation, Sun is 91 million miles away from earth and 5 billion miles from Neptune. In sum up all theories and researches of great scientists by time, we get the significant relationship among time, motion and nature of space.

#### 5. Conclusion

With the help of laws, it was observed that several objects behave according to their situations. By understanding the relation of gravity with other factors of science, it is possible to have a relation with gravitational force. It is not only a matter of relationship but also its intensity and magnitude and it is explained by gravitational force is inversely proportional to the time.

$$G \propto 1 / T \dots\dots\dots \text{equation 1}$$

Here,

G is the gravitational force

T is the time spend by body

Above expression indicated that time acts opposite to gravity, so it can be considered that by coming near to black hole the life time of a person will expend or in other words that it moves slowly. Evidence has been found through satellite that satellite needs to adjust time every after 24 hours as it is away from gravity. Not only this matter but time moves faster on moon than earth due to less gravitational force present over there. So it would be quite rational to say that a person would have different life age at different planets. Furthermore it is explained by gravity of earth i.e.  $9.8\text{m/sec}^2$ , by equation 1:

9.8 meters  $\alpha$  1 / 1 second

It shows that if a body is falling towards ground then it covers 9.8 meters in a second whereas P is a constant factor that helped in explaining the ratio of time and vertical distance travel by the body while falling. It can be written as:

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$P = -\beta \frac{\Delta S}{\Delta T}$ ..... equation 2

Here,

P is the constant factor

$\beta$  is the slope and magnitude

S is the distance cover by the body

T is the time spend by body

Hence

$\Delta T = T$

$\Delta S = S$

By analyzing and combining equation 1 and equation 2:

$P = \pm \beta (\Delta S) (G)$

It was concluded that constant factor P is the product of distance cover by the body and gravitational force with a magnitude of beta. Although it was also assumed that the relation should be in specific direction whether it is positive or negative and should have a high proportionate of reliability.

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