

GRAVITY IS A NEUTRAL CHARGE**Salah Eid**

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ABSTRACT: *We have to change our previous concepts about gravity to a new one, that the equal and opposite charges $e^- + e^+$ or $2e$ are the two equal and opposite halves of the circular motion of an electron revolving a proton in hydrogen atom as this is the basic revolving system extended naturally in the larger system of a planet revolving the Sun or the Moon revolving the Earth. This means that what we call gravity is nothing but a neutral charge in the small and large systems, and by proving this fact the biggest puzzling problem in the history of science about the nature of gravity finds at last a successful explanation.*

KEYWORDS: Gravity, Neutral Charge,

INTRODUCTION

From Galileo to Kepler to Newton to Einstein gravitational phenomenon passed through various stages. Every one of these great figures explained gravity according to his vision and left a numerical law or equation : Newton proved that Galileo's acceleration is inversely proportion to the squared distance from the center of gravity where g or $\frac{v^2}{R}$ multiplied by R^2 is a constant, applying it on the motion of the Moon around the Earth. It is clear that this exactly is Kepler' third law $V^2 R$ which is a constant describing the circular motion of solar planets. In Cavendish laboratory general constant of gravity G had been measured, and this was a great event in the history of science. Multiplying G by the mass of the Sun gives the mentioned Kepler's third law. Einstein presented the curvature in spacetime as an explanation of gravity in his general theory of relativity , in the words of John Wheeler Einstein's geometric theory of gravity can be summarized as : matter tells spacetime how curve! And accordingly this is what makes a planet revolving the Sun

In spite of all these great efforts about gravity we cannot say what it is, and here we are going to prove that it is nothing but a neutral charge!

Key words : The two sorts of fundamental charge , gravitational constant, hydrogen atom , planetary system, circular motion.

1- The basic planetary system:

One day I told myself : if hydrogen atom is a small planetary system with the electron revolving the proton as the central mass of this system, therefore multiplying the proton by the gravitational constant G must give the well known orbital velocity of the electron at its distance from the proton or $v^2 r$, because G with its small value $6.67 \times 10^{-11} m^3 Kg^{-1} s^2$ ⁽¹⁾, has the following dimensions

$$\frac{L^3}{T^2 M} \quad \text{or} \quad \frac{v^2 r}{m}$$

But instead, and for my surprise, the result was the two equal and opposite charges on the electron and the proton, as it was 1.02×10^{-37} , where

$$Gm_p = (2e)^2 \quad [1]$$

Let us examine this equation dimensionally

$$GM = \frac{L^3}{T^2} \quad [2]$$

From Coulomb's Law

$$e^2 = m_e v^2 r 4\pi\epsilon_0$$

Then

$$e^2 = \frac{ML^3}{T^2} \cdot \frac{e^2 T^2}{ML^3} \quad [3]$$

Equating right sides of 2 & 3 according to 1, we have

$$\frac{L^3}{T^2} = \frac{ML^3}{T^2} \cdot \frac{e^2 T^2}{ML^3}$$

where

$$e^2 = \frac{L^3}{T^2}$$

Therefore eq 1 is correct numerically and dimensionally.

On larger planetary system:

The other action in my story was that when I multiplied the unit of neutral charge of hydrogen atom $(2e)^2$ by the number of hydrogen atoms forming our Sun where $N_s = 1.19 \times 10^{57}$ the result was the orbital velocity of any solar planet at its distance R from the Sun or kepler's third law⁽²⁾ as follows

$$N_s (2e)^2 = V^2 R \quad [4]$$

But

$$GM_s = V^2 R$$

Therefore

$$GM_e = N(2e)^2 \quad [5]$$

Previously, for one hydrogen atom

$$Gm_p = (2e)^2$$

This shows that gravity is nothing but the neutral charge on the small and basic level of hydrogen atom and also on the large level of solar system. Therefore, it is clear that on the small level $(2e)^2$ and on the large one $N(2e)^2$ the two equal and opposite charges are the two equal and opposite halves of the circular motion of the electron around the proton and the planet around the Sun.

2- Between the two systems:

The third action in my story was that I supposed planet S revolving the Sun at its hydrogen surface before the electrons are getting free from protons in the above layer of the Sun called corona, and I discovered that this supposed planet moves with the same orbital velocity of an electron revolving the proton before getting free from the attraction of the proton (in the fifth energy level of hydrogen atom) as follows

The orbital velocity of this planet or object is

$$\frac{GM_s}{R} = V^2 = 1.90 \times 10^{11} \quad [6]$$

Where R is the radius of the Sun in meters

This velocity is the same as that of an electron revolving the proton in the outermost level of hydrogen atom (fifth one) before getting free from the proton as follows

$$\frac{m_e v^2}{m_e} = \frac{1.74 \times 10^{-19}}{9.11 \times 10^{-31} \text{Kg}} = 1.91 \times 10^{11} \quad [7]$$

This fantastic discovery⁽³⁾ means that the Sun behaves as one hydrogen atom according to Bose-Einstein's condensation theory. More important than this is that there is no difference between gravity and electromagnetism, where

$$v^2 = \frac{GM_s}{R} = \frac{(2e)^2}{16\pi r m \epsilon_0} \quad [8]$$

Making Einstein's dream of unifying gravity and electromagnetism a fact !

It is clear that from equation 8 we have a definite ratio between the radius of hydrogen atom r and that of the Sun R as follows

$$\frac{r}{R} = 1.91 \times 10^{-18} \quad [9]$$

The two radii are in harmony, and the layers of the Sun from its surface to its core can be determined according to the levels of energy in hydrogen atom.

CONCLUSION

Gravity is the circular motion created by the neutral charge with its two equal and opposite halves where the electron revolves the proton in hydrogen atom as the smallest and basic planetary system. In larger planetary systems like the Sun or Earth the number of hydrogen atoms forming the central mass of the system the whole neutral charge causes the circular motion of the planets around the Sun or the Moon around the Earth.

REFERENCES

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In Mks , dividing Kepler's third law by the mass of the Sun gives the same value of G where

$$\frac{1.32 \times 10^{20}}{1.99 \times 10^{30}} = 6.63 \times 10^{-11}$$

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