

## The Real Nature of Gravity

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DOI: 10.7176/APTA/87-05  
Publication date: December 31st 2023

### Introduction:

Newton described gravity between two objects in relation to their masses not through their relation with the center of gravity he also considered the circular motion a balance between gravity and inertia or a conflict between moving in strait line and falling towards the center of gravity where what is called acceleration takes place here. Einstein found gravity a curvature in 4 dimensional space-time fabric proportional to object mass according to his general relativity<sup>(1)</sup> but in fact gravity is neither this nor that. It is well known that Albert Einstein spent much of his later years trying to unify gravity and electromagnetism but without success<sup>(2)</sup>. Here we are going to prove that gravity in a neutral electric charge.

### What gravity is ?

- 1- In fact gravity is a circular motion directing to its center, the two halves of any circular motion are equal in magnitude and opposite in direction. This is exactly the same state in hydrogen atom with the negative charge on the electron and the positive charge on the proton where the electron revolves the proton with the following circular motion formed from the mentioned equal and opposite charges:

$$(e^- + e^+)^2 = (2e)^2 = 1.0265 \times 10^{-37}$$

But this is the same circular motion in gravitational constant G after multiplying it by the proton's mass in Kg as following

$$(2e)^2 = Gm_p = v^2r = 1.126510^{-37}$$

Why the circular motion is the same in the two states? Simply because the gravitational constant G is the ratio between circular velocity  $v^2r$  and the proton's mass  $m_p$  in Kg, then multiplying G by proton's mass gives the circular motion around the proton which is nothing but that of electron

- 2- Another proof of the gravitational nature of  $(2e)^2$ , multiplying it by the number of hydrogen atoms forming the Sun which is  $N_s = 1.19 \times 10^{57}$  then we have the squared circular velocity of any solar planet at its distance from the Sun

$$(2e)^2 \cdot 1.19 \cdot 10^{57} = 1.32 \cdot 10^{20} \quad (3)$$

This is Kepler's third law  $4\pi^2 \frac{R^3}{T^2}$  or  $V^2 R$

Thus, gravity is basically the circular motion formed from the fundamental two equal and opposite charges.

### References:

- 1- <http://en.wikipedia.org>
- 2- the same reference
- 3- Eid Salah: The Electromagnetic Unit of Gravity , [www.usa-journals.com](http://www.usa-journals.com) P46