

Unification of the nature forces

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Abstract

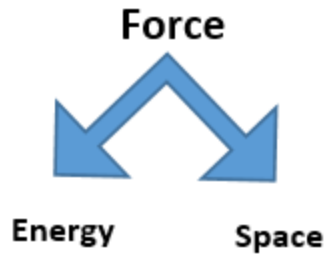
One of the most important problem in today's physics is the integrity of the four main forces of nature. This article is intended to introduce a formula as the static core formula of all forces. The theory states that the force is the energy multiplied by the motion function; or in other words, the energy which is stuck in the motion function. We explained the reason of the forces damping.

Keyword: unification of forces, electrostatic force, magnetic

Introduction

Physicists have been struggling for years to unifying the nature forces; and so far reach to the union of the two forces of electromagnetic (Maxwell theory)¹ and weak interaction force, but none has obtain the unification of all forces Among the most recent efforts in this field we can mention to reference ³

Here we present a theory, which have a new definition of the magnetism, and claim that the origin of all forces is the same. The clash of this force with the spherical wave motion function and a damping factor indicating the definition of all forces including electrostatic force and the magnetic force.



The main Formula

We know that the forces definite as below:

$$F = m\dot{v} + \dot{m}v \tag{1}$$

With multiplying c^2 in (1) we have:

$$Fc^2 = E\dot{v} + \dot{E}v \tag{2}$$

Which in that E =Energy, v =velocity, c =speed of light in vacuum and F =force.

If we place Ψ in equation as movement function, we have, when $v \rightarrow \Psi$:

$$Fc^2 = E \frac{d\Psi}{dt} + \frac{dE}{dt} \Psi \tag{3}$$

Then we can write:

$$F \rightarrow \frac{(E\dot{\Psi})}{c^2} \tag{4}$$

At first glance, eq. (3) is a simple replacement, but we want to introduce a new definition for forces

Let us

$$\begin{aligned}\Psi &\Rightarrow \frac{1}{r} e^{i \frac{2\pi (x-ct)}{\gamma}} & (5) \\ &= \text{Cos}\left(\frac{2\pi (x-ct)}{\gamma}\right) + i \text{Sin}\left(\frac{2\pi (x-ct)}{\gamma}\right) \\ &= \frac{1}{r} \left(\text{Cos}\left(\frac{2\pi (r-ct)}{\gamma}\right) + i \text{Sin}\left(\frac{2\pi (r-ct)}{\gamma}\right) \right)\end{aligned}$$

If we consider $\frac{1}{r}$ as the damping function for gravitational force we will have:

$$f(E)_{gravity} = G \left(\frac{m_1 m_2}{r} \right) \quad (6)$$

$$\dot{\Psi} = \frac{\gamma}{2\pi * c} \left(\text{Sin}\left(\frac{2\pi (x-ct)}{\gamma}\right) - i \frac{\gamma}{2\pi * c} \text{Cos}\left(\frac{2\pi (x-ct)}{\gamma}\right) \right) \quad (7)$$

$$F_{Gravity} = \dot{E}\dot{\Psi} + E\ddot{\Psi} \quad (8)$$

$$\begin{aligned}F_{Gravity} &= G \left(\frac{m_1 m_2}{r^2} \right) \left[\frac{\gamma}{2\pi * c} \left(\text{Sin}\left(\frac{2\pi (x_1-ct)}{\gamma}\right) - i \text{Cos}\left(\frac{2\pi (x-ct)}{\gamma}\right) \right) \right. \\ &\quad + G \left(\frac{m_1 m_2}{r} \right) \left(\frac{\gamma}{2\pi * c} \right)^2 \left[\text{Cos}\left(\frac{2\pi (x-ct)}{\gamma}\right) \right. \\ &\quad \left. \left. + i \text{Sin}\left(\frac{2\pi (x-ct)}{\gamma}\right) \right] \right]\end{aligned}$$

(9)

And for another two main forces: electrostatic and magnetic forces have:

$$f(E)_{electrostatic} = \frac{Q}{4\pi\epsilon_0 r^2} \quad (10)$$

$$F_{electrostatic} = \left[-2 \frac{Q}{4\pi\epsilon_0 r^3} * \frac{\gamma}{2\pi * c} \left(\text{Sin} \left(\frac{2\pi (x-ct)}{\gamma} \right) - i \text{Cos} \left(\frac{2\pi (x-ct)}{\gamma} \right) \right) + \frac{Q}{4\pi\epsilon_0 r^2} \left(\frac{\gamma}{2\pi * c} \right)^2 \left[\text{Cos} \left(\frac{2\pi (x-ct)}{\gamma} \right) + i \text{Sin} \left(\frac{2\pi (x-ct)}{\gamma} \right) \right] \right] * d_e(r) \quad (11)$$

and

$$F_{electrostatic} = G \left(\frac{m^2}{r} \right) \left(\frac{\gamma}{2\pi * c} \left(\text{Sin} \left(\frac{2\pi (x-ct)}{\gamma} \right) - i \text{Cos} \left(\frac{2\pi (x-ct)}{\gamma} \right) \right) + \left(\frac{\gamma}{2\pi * c} \right)^2 \left[\text{Cos} \left(\frac{2\pi (x-ct)}{\gamma} \right) + i \text{Sin} \left(\frac{2\pi (x-ct)}{\gamma} \right) \right] \right) \quad (12)$$

Which $d_e(r) = \frac{222}{r}$ they have been found with numerical solution; this is dampers factor; dampers are other forces which are directed against our considered force.

We know that the magnetism is a force arising from a mass that moves outward in the vicinity of a charge and we obtain

$$\begin{aligned}
F_{magnetic} = G \left(\frac{m^2}{r} \right) & \left[\frac{\gamma}{2\pi * c} \left(\text{Sin} \left(\frac{2\pi (x - ct)}{\gamma} \right) \right) \right. \\
& - i \text{Cos} \left(\frac{2\pi (x - ct)}{\gamma} \right) + \left(\frac{\gamma}{2\pi * c} \right)^2 \left[\text{Cos} \left(\frac{2\pi (x - ct)}{\gamma} \right) \right. \\
& \left. \left. + i \text{Sin} \left(\frac{2\pi (x - ct)}{\gamma} \right) \right] \right] d_m(r)
\end{aligned} \tag{13}$$

Whic $d_m(r) = \frac{0.0111}{r}$;

x= Center to center distance of two particles.

r₁= Center to surface distance of two particles with considering sign.

γ= wave length

Considering the electrostatic force as the most important proton force, it can be deduced that the strong nuclear force is the superposition of the force wave function of the proton (figure 1); it means proton force functions, as being cosine, in their first period creates space pit as these functions overlap. This overlap is manifested as mass and change in space. for describing this phrase let me announce a evident rule that two similar-genus force in superposition should sum up together, depending on the direction of their “x” in a same coordinate system; and two dissimilar-genus force in superposition should divide together; albeit must attend the “x” be in a same coordinate system.

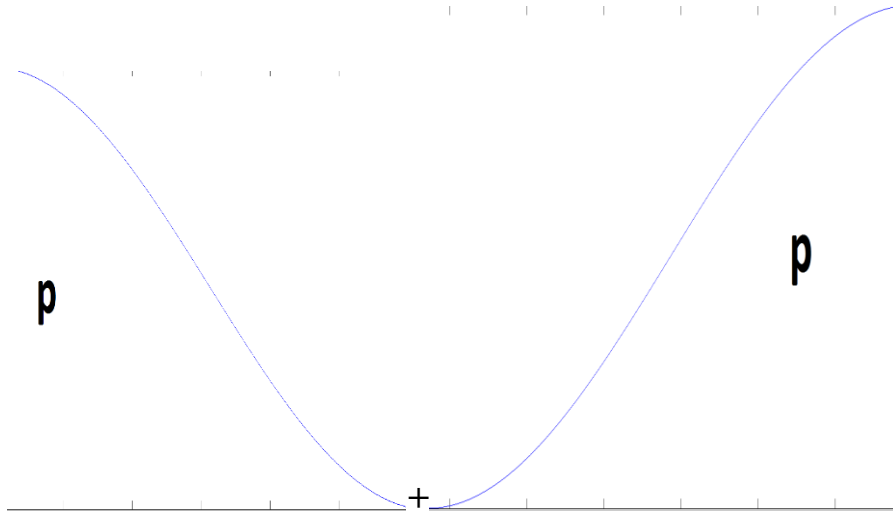
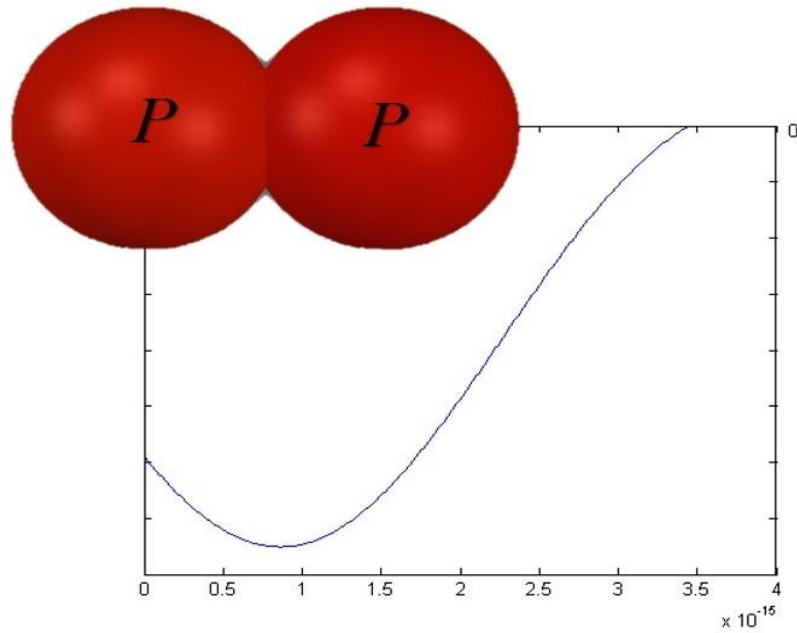


Figure 1 formation of connection between two proton

In above we claimed the strong nuclear force is only super position of two electrostatic force of protons:

$$F_{ts} = F_{es1} + F_{es2} \quad (14)$$



;

Figure 2 the profile of force between two proton in $r= 0$ to 4 fm

And now for the weak nuclear force; in this position there are two big force:1- the magnetic force from neutron and proton, 2- electrostatic force from proton; which those are in contrary with each other:

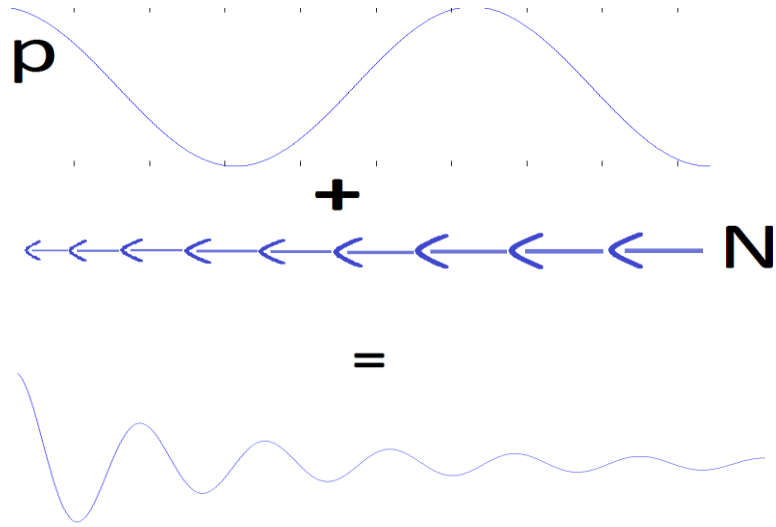


figure 3 The offered profile of the weak nuclear force

Then they should divide on :

$$F_{tw} = F_{es} \hat{e}_{kj} \div F_g \hat{e}_k \tag{15}$$

With considering electrostatic and magnetic as two perpendicular forces, the predicted force diagram is as follows (figure 4):

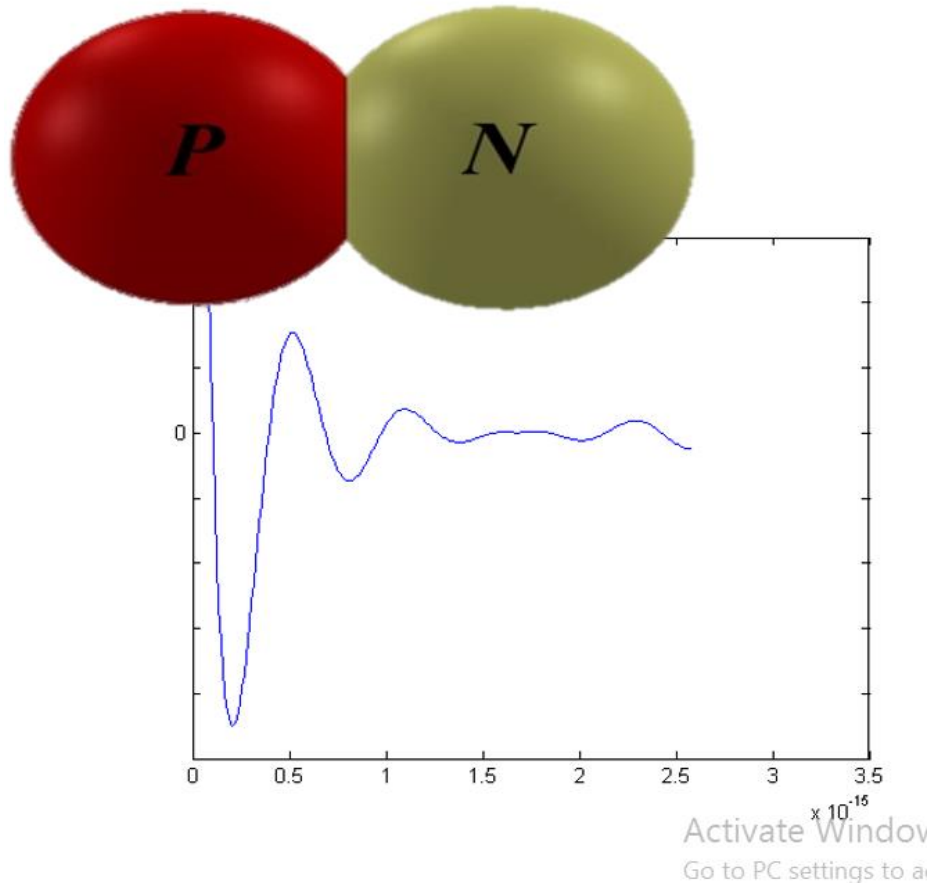


figure 4 The gained profile of force between neutron and proton in $r=0$ to 2.7 fm.

It should be noted that the magnetic force is the arising force from the mass that being oriented outward along the positive charge.

The profiles obtained in figure 2 and figure 4, for approximation to mind, multiplied in a negative sign but actually in attraction mode the sign of force is positive and in repulsion mode is negative which this concept is closer to reality.

Conclusion

This theory is derived from conflation of spherical wave motion of gravitational energy term and a damper factor. This theory states that two second-level forces of nature are the electrostatic and the magnetic force; that the nature is made of them and other forces are derived from these two forces.

Considering the force of God as main force of the universe we can describe all known force; albeit give a new description of the universe that, in its heart, can answer most of the inconsistency and problems of physics

From above statements we can understand that every force consist of itself multiply in a damping coefficient; in fact, this coefficient is all other forces which are effective on main force; based on the laid out law, other forces have been divided into first force.

Since we consider the forces as the energy carried by the equation of motion, and we know that the force is never lost, is expected the following law is there:

(The plus sign can be used both as a positive and negative charge force and as a positive and negative force¹.)

From this theory we can know that change in forces, based on the equalities of energy, can result to the change in mass or space. This phenomena is well observable in the interaction of the two proton forces. In the phenomenon which is called “strong nuclear force” the radius and mass of proton is changing.

In other words, the mass is the interference of the positive of forces; and energy made the interference of the negative force. Mathematically, the linearization of the wave equation creates space, or displacement; downward interference of the wave equation creates the mass; upward interference the wave equation creates the energy and any interaction can cause change in space or location.

It should be noted that in the macro dimensions the main energy formula can accommodate.

The consequence of the creation of mass and energy, is to change in space at least in one dimension.

Reference

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