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Electrical Attraction Law by Electron Flow Unifies Attraction and Repulsion into a single Attraction Force and solves Strong Nuclear Force Mystery

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Abstract
Opposite electric poles attract while like poles repel, this is a very simple concept after experimental observation, this interpretation create basis of Strong Nuclear Force mystery; on atomic nucleus protons hold positive charge, and don't repel each other due to Strong Force glue. Key to solving the mystery lies in analyzing how attraction and repulsion works. Considering electrical attraction is produced by electrons flow from one pole to the opposite, we can deduce; repulsion between two positive punctual charges is product by electrons lack on approaching side between the two charges due to competition to capture electrons. Consequently, electron capture occurs on opposite approaching side, since there is no competition on this side. By capturing electrons on opposite approaching side, repulsion happens, or rather, attraction occur toward opposite approaching side. This analysis would greatly simplify electrical behavior and explain fundamental questions remained unexplained, such as why two equal electric currents parallel wires attract each other (the basic experiment of magnetism). This would unify electricity and magnetism concepts, as well as explain Strong Nuclear Force in a simple way: If electrical attraction and repulsion are unified into a single attractive force, then protons have no problem coexisting in the atomic nucleus due to the absence of repulsion. Strong Force mystery would be solved.

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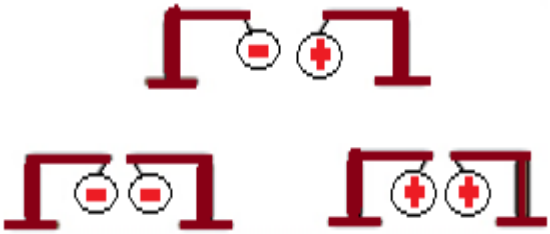
Keywords: Electrical attraction, Electrical repulsion, Strong Nuclear Force mystery, Electrical attraction and repulsion Unification

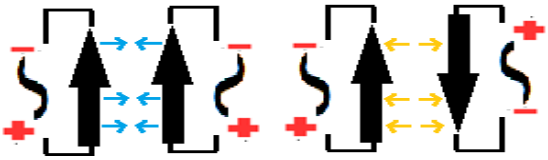
1. Introduction

Coulomb's law states, " the force between two-point charges is directly proportional to the product of the magnitudes of the charges and inversely proportional to the square of the distance between them. The force is repulsive if the charges are of the same sign, and attractive if they are of opposite sign." Coulomb's law is valid only under stationary conditions, when there is no movement of the charges. This is why it is called "electrostatic force." Around 1822, Ampere discovered the attraction or repulsion between parallel conductors carrying current in the same or different directions. He described how two parallel conducting cables carrying an electric current in the same direction attract each other, while if the current in both cables flows in opposite directions, they repel each other. This experiment not only describes moving charges, but also serves as the basis for magnetism; moving charges produce magnetism and therefore magnetic attraction and repulsion. However, it seems that Coulomb's law does not apply to moving charges and therefore cannot be applied to the repulsion or attraction between current-carrying wires. These electromagnetic phenomena lacked a law that could reasonably describe them. Finding a single law for both experiments, one that would explain both electrostatic and electrodynamic forces, would produce a conceptual electromagnetic unification, since until now, the unification of both forces has been resolved solely mathematically by the Ampere-Maxwell law.

2 Coulomb's Law application to point loads.



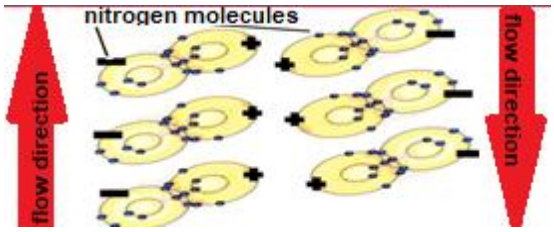
3 Coulomb's law application between two current-carrying conductors



André Marie Ampere describe the force between two current-carrying conductors: same direction currents conductors attract each other, and those with opposite currents repel each other.

To study this phenomenon, let's look at a diagram of what happens to nitrogen molecules on air (nitrogen makes up 78% of air).

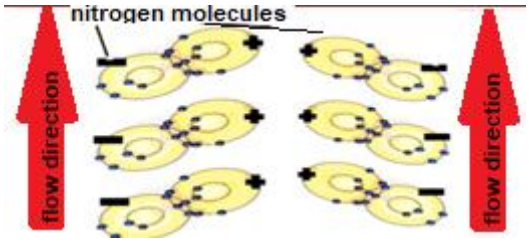
3.1 Opposite current wires



Nitrogen molecules on air orient toward conducting wire, transforming them into electric dipoles, with negative pole pointing toward the wire and positive pole facing away from it. This causes molecules on both sides of the wire to face each other at positive pole, producing repulsion between them.

This situation could therefore be explained by Coulomb's law.

3.2 Two same direction current wires



As with cables with opposite current; Nitrogen molecules on air orient toward conducting wire, transforming them into electric dipoles, with negative pole pointing toward the wire and positive pole facing away from it. This causes molecules on both sides of the wire to face each other at positive pole, producing repulsion between them.

But experience tells us that there really is an attraction.

3.3 Conclusion

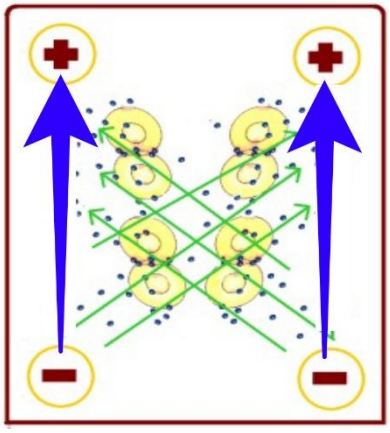
Both situations result in a repulsion and that is not what happens with Ampere's experiment 4 General Law Of Electromagnetic Attraction By Electron Flow “Angel's Law” To solve this paradox let explore a new electrical attraction law based on electron flow.

Let’s turn to the atomic-molecular field.

Electromagnetic attraction force is produced between atoms and molecules to capture electrons, the consequence is: to perceive this attraction, a continuous flow of electrons at the molecular level is required.

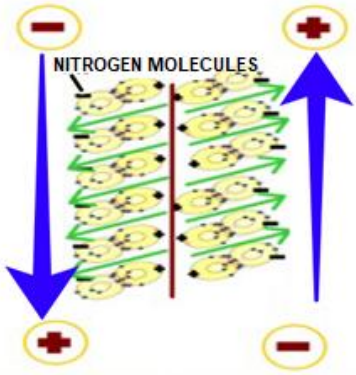
We can apply this new Law to electric current cables arranged in parallel:

4.1 Two same direction current wires:

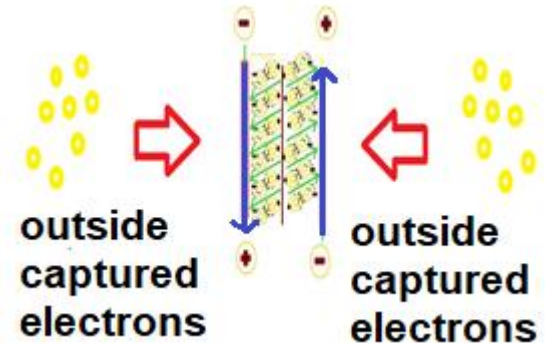


Molecules represented on the inside between wires are nitrogen ones, the main component of air. Green lines represent electrons flow; There is not only electrons flow from negative to positive pole of each wire, but also from negative pole of one wire to positive pole of the other, thereby producing attraction. The wires also attract electrons from outside air molecules, but on this side, electron flow is very weak because lack on electron supply source, as occurs inside.

4.2 Two opposite direction current wires



Molecules inside between wires tend to transfer electrons to the current-carrying wires from both opposite sides. This competition cuts off the transfer and electrons flow, deactivating attractive effect produced inside between wires.



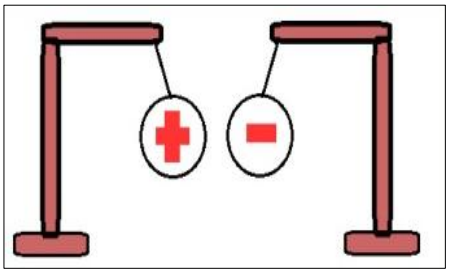
The consequence is that both conducting wires now continuously absorb electrons from air molecules outside, producing an attraction toward those external air molecules. This outward attraction, which was called repulsion under the prism of Coulomb's law, is now described as attraction toward opposite side.

But if current-carrying wires really absorb electrons from surrounding air, then with a single wire without a parallel one, it should move as the electric current circulates inside.

However wire absorbs electrons from air in all directions uniformly, such attraction produced by it is also compensated in all directions.

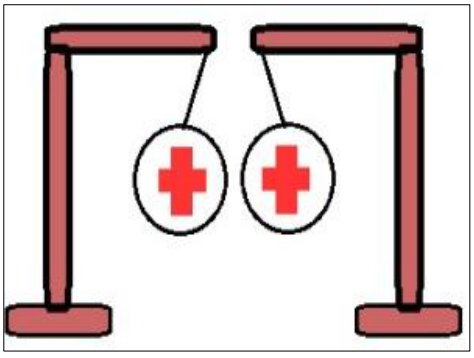
5 Attraction law application to point loads

5.1 Two opposite charges



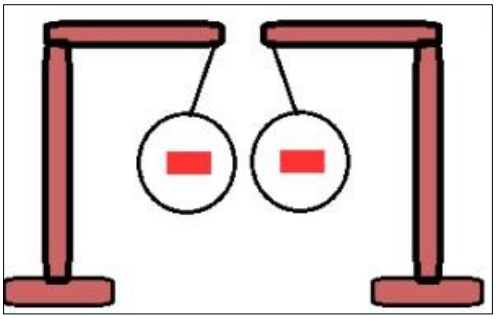
Electron flow is produced through the air from negative charge to positive one, both charges attract each other due to this flow.

5.2 Two positive charges



The air molecules inside between the charges tend to donate electrons to positive charges by opposite sides. Without a continuous supply of electrons, flow break toward charges, and attractive effect inside disappears. However outside, positive charge receives a continuous electrons flow donated by external air molecules, attracting charges outward.

5.3 Two negative charges



Both negative charges emit electrons toward air molecules between then, which quickly become electrons saturated for both sides. Flow breaks, and attractive effect disappears as electron flow breaks between charges. Outside, negative charges emit continuous electrons flow toward external air molecules, and charges attract outwards.

6 Conclusion and consequences

Electrical attraction by electron flow Law “Angel’s Law” UNIFIES:

- Electrical attraction and repulsion into a single attractive force
- Electrostatics and electrodynamics
- Electricity and magnetism

Coulomb only experimentally verified what happens on nature, with charges approaching repulsion (moving away) or attraction; however, upon deeper and more rational analysis, it is logical to think of a single attractive force, not only because of the simplicity of the theory but also because by assuming Angel's Law, the mystery of two natural forces is revealed:

6.1 Electromagnetic Force and Strong Nuclear Force

Indeed; the Strong Nuclear Force is what holds protons together in the atomic nucleus, since they should repel each other due to their equal positive charges.

Due to Angel’s Law: Electric attraction force is produced between atoms and molecules to capture electrons, and inside the atom; there isn’t electron flow between the protons of the nucleus and the electrons of the atom.; Therefore, there isn’t electrical repulsion nor attraction, between protons inside atomic nucleus, and Strong Nuclear Force mystery is solved by its nonexistence.

"Angel's Law" is therefore confirmed because it correctly explains Ampere's experiment two parallel current cables and Coulomb’s experiment on point charges.

7. References

1. Ampère A-M, Ampère J-J. Philosophie des deux Ampère. Paris: Barthélemy-Saint-Hilaire, Jules; 1866.
2. Coulomb C-A. Premier mémoire sur l'électricité et le magnétisme. Histoire de l'Académie Royale des Sciences. 1785:569-577.
3. Maxwell JC. Treatise on Electricity and Magnetism. Oxford: William Davidson Niven; 1873.
4. Perez Sanchez A. Finally a Reasonable Theory of Everything. Madrid: Amazon; 2021.
5. Perez Sanchez A. Consideration of Starlight Waves Redshift as Produced by Friction of These Waves on Its

Way through Space. World Academy of Science, Engineering and Technology. 2024;18(10):1030-1034.
6. Perez Sanchez A. Magnetic Lines of Force & Diamagnetism. World Academy of Science, Engineering and Technology. 2023;17(8):876-880.
7. Perez Sanchez A. Consideration of Magnetic Lines of Force as Magnets Produced by Percussion Waves. World Academy of Science, Engineering and Technology. 2024;18(9):950-954.
8. Perez Sanchez A. Earth's Outer Core Metal Liquid Flow Generates Magnetic Field without using Geodynamo. Global Journal of Researches in Engineering: A Mechanical and Mechanics Engineering. 2025;25(1):1-10.
9. Perez Sanchez A. Twisters and Traveling Higgs Bosons, Unify General Relativity and Quantum Mechanics, and explain Dark Matter. Global Journal of Researches in Engineering: A Mechanical and Mechanics Engineering. 2025;25(1):11-20.
10. Perez Sanchez A. Discovery a Periodic Table New Rule by Studying the Noble Gases Atomic Numbers Sequence. International Journal of Multidisciplinary Research and Growth Evaluation. 2025;6(3):1030-1034. doi:10.54660/.IJMRGE.2025.6.3.1030-1034.