

THE NEW PHYSICS

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SUMMARY

With the correct mathematics, it turns out that scientifically Ohm's law is not correct and the capacity and resistance of the coil proportional to the square of the charge and the change of current respectively. A new theory of electricity is created.

By overturning the explanation given by Edison to the emission of electrons from the incandescent lamp, we are changing physics, since we no longer accept electrons and protons. In their place there are two bubbles of sparse ether, proposed by my cosmic theory THE IODION. They are electrical bodies opposite (electric charge opposite), they roam circularly and create electric current $I = ef$. Charges and currents are attracted and comes the new theory of the atom, partially different at low pressure of the element gas with it in one atmosphere. And the unit system is differentiated.

It is proved by unshakeable mathematics, that when one body is attracted to another and rotates circularly around the other, then the force, the attraction, is inverse of the square of their radius. This overturns the established theory of the solar system! And the earth is light if we correct the Cavedish's mistake, and in its core it has a plasma surrounded by dense gases

INTRODUCTION

With the construction of the new physics that began with the PRIVILEGED FRAME SYSTEMS AND THE LAW OF LIGHT (1993), which I presented on 05/06/1993 before the professors of the University of Ioannina and the successive correction of physics, but mainly with the creation of my cosmic theory THE IDION, we summarize here the following. In 1997 with the MOVEMENT OF A MATERIAL POINT AS A NON-INERTIAL FRAME SYSTEM (which is my most difficult task of all of preoccupation), I supplemented the overthrow of the theory of relativity, giving the transformations between inertial and non-inertial reference systems. The advent of my cosmic theory since 2006, opened new paths and my work on the new electricity that I published in 2014 in the International Journal of Electronics and Electrical Research and in the Physics News of the Union of Greek Physicists, laid the foundations of the definitive overthrow and successively of the new atomic physics.

METHODOLOGY

In this work, induction is used almost the entire area and deductive musings are used. Hypotheses become hypotheses - prerequisites for the unfolding of the theory. The prerequisites are both principles and axioms, which are requested in order to build the theory.

The ancient Greek philosophers used the principles to build their theory and here we will imitate them. Aristotle¹ will point out the necessity of principles.

THE PRIVILEGED SYSTEMS

If we have a gunner, who shoots horizontally and within a vacuum tube, he will describe the movement of the sphere with the principles of conservation of energy, momentum and angular momentum. Another observer who moves in circles above the first, will see the bullet leaving maneuvering. For him the same laws of nature do not apply in the description of the phenomenon.

Equipped with all the stellar instruments observer on earth, he will conclude that the moon revolves around the earth, but the observer on the moon with the appropriate observational instruments will decide that the moon revolves around the earth.

The earth is a privileged frame system and the privileged systems exist from the microcosm to the megacosm, then the speed of light is not the same for all frame systems and the theory of relativity is not founded.

REVERSAL OF THE LAW OF OHM'S

When an electric field E acts on an electrical carrier e , then the force is,

$$F=eE=m\Delta v/\Delta t=eV/L \quad \text{and}$$

$$V=kmv^2.$$

But $I=Ne/\Delta t=NeL/L\Delta t=NeV/L$ and $v=IL/Ne=ILA/NeA=I/neA$, and

$$V=k(m/n^2e^3A^2)I^2.$$

Then the capacity of the capacitor is, $C=q^2/V$

But the centripetal power is,

$$F=mv^2/r=mv^2r^2/r^3=k/r^3$$

When one particle is rotated around another, then the pulling force is inverse of the cube of the radius of them, as is the particle's electric field, $e=E.Vol$, where Vol is the volume, since the radius rises to the cube.

So, $C=q^2/V=q^2E(Vol)/EL=qA$, and A is the surface of the capacitor armaments.

¹ Aristotle PHYSICS and ABOUT THE SOUL

With dielectric in the capacitor $V_c = V/\epsilon$, where ϵ the relative dielectric constant.

$V - V_\epsilon = V(1 - (1/\epsilon)) = \Delta V$. And when $q'V = qV$ then $q' = q(1 - (1/\epsilon))$. Q is the charge after polarization $P = q'/A$. And because $P = q'L/LA$, where L = length of capacitor armaments, then the polarization P is the bipolar moment per unit volume of the capacitor armaments. And because $q' = q(1 - (1/\epsilon))$, then $q'/A = (q/A) - (q/\epsilon A)$, q'/A is the induction unit of charge on the surface of armaments A of the capacitor. And $q/A = QL/LA = T$, is the bipolar moment per unit volume of the capacitor reinforcements, before the dielectric unit enters. And after the admission of the dielectric $T_c = qL/\epsilon LA$. Then $T = P + T_c$ and $P = T(1 - (1/\epsilon))$.

There is no electrical inductance in the coils, instead there is a special resistance of the coil in which we considered the inductance.

$$V = L(\Delta I/\Delta t)^2 \quad \kappa \alpha L = k(m/n^2 A^2 e^3)\Delta t^2.$$

If we equate the voltages V of the coil and the capacity of a Thompson circuit ($V = L(\Delta I/Dt)^2 = \Delta q^2/C$), then if $\Delta t = T$ = period of alternating current, then the frequency $f = (CL)^{1/4}$.

THE MISTAKE OF INTRODUCING THE DIELECTRIC CONSTANT

As you know, there was the MKS-Amp unit system (meter, kilogram, second, Ampere, Coulomb the charge) that evolved into SI, and the CGS-stat-Amp, (where units are the cm, gram, second, stat-Amp and charge the stat-Coulomb). $C_b = 3 \times 10^9$ stat-Cb, $N = 10^{-5}$ dyn for the force and $cm = 10^{-2}$ met.

In the CGS-stat-Amp system, the traction law of the Coulomb charges is, $F = q_1 q_2 / r^2$. BUT IN THE MKS-Amp system, they arbitrarily put the constant k and now $F = k q_1 q_2 / r^2$.

And now between systems it applies, $F_{MKS} = 10^{-5} N = k \{C_b / 3 \times 10^9\}^2 / 10^{-2}$, and solving as to $k = 9 \times 10^9 = 1/4\pi\epsilon_0$. With this arbitrariness was found the dielectric constant of the vacuum ϵ_0 .

THE MISTAKE AROUND THE CONSTANT OF MAGNETIC PERMEABILITY OF THE VACUUM

It has been hypothesized² that in the vacuum applies $B_0 = m_0 H$ and the magnetic permeability of the vacuum μ_0 has been established. This was considered as constant. Indeed Ampere, who was experimenting with the attraction of electric currents of parallels³, arbitrarily determined $\mu_0 = 4\pi \times 10^{-7}$.

When we have a circular conductor leaking by current, the magnetic field in the center of the conductor is $B_c = 2\pi\mu_0 I/p(r/2) = 2\mu_0 I/(r/2)$ and $r/2$ = radius of circular conductor (below we will give the proof). In the case of coil, then $B = N 2\mu_0 I/(r/2)$, where N = coils of the coil. If we

² ELEMENTS OF PHYSICS, ELECTRICITY, Kougioumtzeli-Peristeraki, p. 214

³ NATURAL B, Halliday-Resnick, p. 208.

put magnetic material in the coil, then the coil, in addition to B, acquires the magnetizing field M, (the magnetic field is increased by $M=nI_M$, $n=N/L$) and we assume a current I_M . Then $B2\pi(r/2)=\{(2\mu_0NI/(r/2)\}2\pi(r/2)+\{(2\mu_0NI_M/(r/2)\}2\pi(r/2)$.

The magnetic moment is $\mu=NI_M A=M(\text{Vol})$, $\text{Vol}=\text{coil volume}$ and after operations,

$$B(r/2)=2\mu_0(NI+ML) \quad \text{και} \quad ML=NI_M \quad \text{και}$$

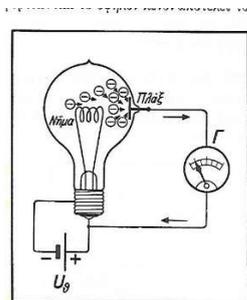
$$\mu_0=B(r/2)/\{N(I+I_M)\}$$

μ_0 is inversely proportional to the coils of coil N, that is, it varies by the size of the coil.

THE ATOM OF THE HYDROGEN UNDER LOW PRESSURE

We have taken the spectra of the elements, like the hydrogen and the gaseous elements were at a pressure of less than 0.008 bar. Balmer described the spectrum of hydrogen in his empirical formula, $\lambda=\lambda_0\{(1/n_f^2)-(1/n_i^2)\}$, where λ the wavelength of the radiation with an initial λ_0 wave and n_f =final electron level and n_i =initial level.

The existence of electrons was "proved" by Edison when he built a fire lamp and between the thread and another pole he put a capacitor, created an electrical voltage and a small flow of current was observed.

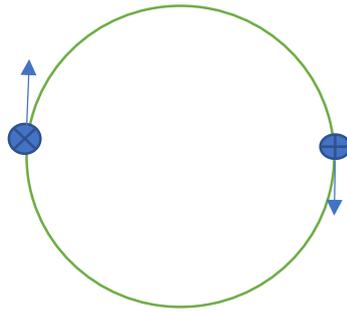


Σχ. 438. "Όταν ή πλάτ συνδέεται, μέσω του ελαστικού γυθιανόμετρου, προς τον θετικό πόλο πηγής συνεχούς τάσεως, η ηλεκτρική κινούνται εκ του διαπόρου νήματος προς την πλάκα.

He considered that the fire filament emits electrons, which constitute the current observed. However, only photons are emitted into the lamp, which become carriers of the small current; there are no electrons and protons!

Hydrogen is the simplest element, consisting of two smaller "particles", which must be equal and identical in charge and mass, in order for the particle and its center of mass to perform harmoniously the movements. This is a prerequisite for it to be the case.

These two particles are bubbles of dilute ether within the denser environment. They move circularly around their center of mass, create a magnetic field B each and electric current $I = ef$, f = frequency of rotation and the interaction of their electrical charges with the magnetic field, create the mass of the bubble $m_b = 1/2 kBe^2$, k = dimensional constant. The hydrogen atom is a bound photon, with a rotational velocity of the c particles.



Atom of hydrogen with the two bubbles-particles rotating around their center of mass at the speed of c , it is a bound photon.

The radius between the bubbles is r and $r/2$ their distance from their center of mass. There is one electrical attraction due to the electrical charges and is inverse of the cube of their radius and another, which is due to the electrical attraction of the opposite charges-electric carriers, such as when parallel current conductors are attracted. The two forces are equal and that is a prerequisite. The analysis is done in the privileged frame system of one bubble and the radius between the bubbles is r in the law of the inverse cube of the radius. And rotational velocity c , in which case the pull force,

$$F = \{k d B e^2 / r^3\} + \{\mu_0 I_1 I_2 2\pi(r/2) / 2\pi r\} = m_b c^2 / (r/2) = m_p c^2 / r$$

The d is coming from $F = m\omega^2 r = m\omega^2 r^4 / r^3$, it is $d = (\omega r^2)^2$.

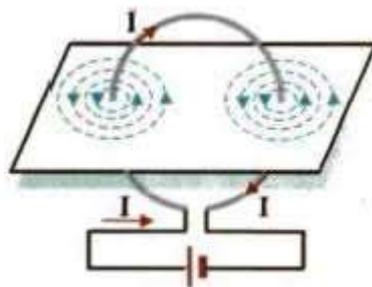
From Balmer's empirical formula we know that $\lambda_0 = 91.1 \text{ nm} = 2\pi(r/2)$, and $r/2 = c/\omega = 1.45 \times 10^{-8} \text{ met}$. And $f = c/\lambda_0 = 3.29 \times 10^{15} \text{ Hz}$.

We mentioned that $I = ef$ and $I_1 = I_2$ in the hydrogen atom and we consider that $I = 1 \text{ Amp}_H$, in which case $e = 3,037 \times 10^{-16} \text{ C}_{bH}$. The $\omega = c/(r/2) = 2.06 \times 10^{16}$. The $d = (\omega r^2)^2 = 300.14$.

The magnetic moment will be, $\mu = I\pi(r/2)^2 = 6.6 \times 10^{-16} \text{ Amp}_H\text{-met}^2$. And $m_p = k B e^2 = 9.2 \times 10^{-32} \text{ kB}$. And $E_p = 2E_b = m_p c^2 = 8.3 \times 10^{-15} \text{ kB}$. And $E_b = m_b c^2 = 4.15 \times 10^{-15} \text{ kB}$.

But B , the magnetic field that one bubble exerts on the other that orbits circularly, such as the circular current ring in the figure below, and arises, since the magnetic energy is $E_m = \mu_0 I^2(r/2) = (\mu_0 I/p(r/2)) I p(r/2) = m (\mu_0 I/p(r/2)) = \mu B$ and

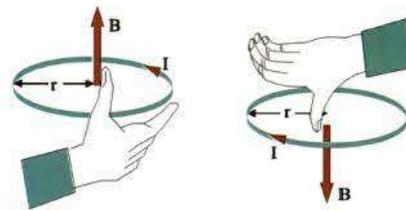
$$B_p = (\mu_0 i / \pi(r/2))$$



m

B_p

And the magnetic field that envelops the current I and if we multiply it by 2π , is the magnetic field B_c of circular current in the center of the circle, $B_c = \mu_0 2I / (r/2)$. In the upper shape, B_p , wraps the duct and let it be circular.



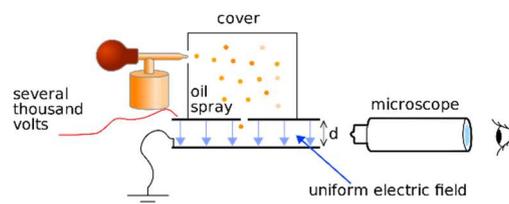
B_c

Now $E_b = m_b c^2 = 4.15 \times 10^{-15} \text{ kB} = 2\pi \mu B_p$ and $B_p = 18000 \text{ TH}$. And $m_p = 1.672 \times 10^{-27} \text{ kgr}$.

Then the magnetic permeability of the vacuum, for the hydrogen atom at low pressure is, $\mu_0 = B_p \pi (r/2) / I = 8.2 \times 10^{-4}$. And $c = E / B_c = 297.2 \times 10^6 \text{ met/sec}$. And $k = 1$.

THE EXPERIMENT MILLIKAN

With this experiment, the elementary charge was determined. Here, data from MODERN PHYSICS are taken. Serway p. 95-100.



Millikan took a bellows and blew drops of oil in a capacitor; as you can see the experiment was done at 1 Atm pressure and serves us to analyze the hydrogen atom in these conditions.

If you refer to a chemistry, the oil is a macromolecule and has an extremely large number of hydrogen atoms. So when rubbing with the murmur, hydrogen molecules are also charged mainly. When the charged drop of oil falls without effect, it has a velocity v and we observe it from the microscope. When we influence a voltage of thousands of Volts on the capacitor, the course of the drops is reversed and now they have different speeds, the v' . The charge of the drop may be different from others, or they may have a different weight. But the charge is not a constant and the different values of anode speeds v have shown it. For the determination of the charge q drop m , found the formula,

$$q = \{mg / (V/L)\} \{ (v + v') / v \}$$

and found different charges, the smallest $q = e = 8.39 \times 10^{-19} \text{ Cb}$, which we consider to be the charge of the hydrogen atom ion that prevails in the microcosm.

The ion is the hydrogen atom that has a charge. Here a bond of the atom with another atom is stripped in the drop of oil. And it has the outer charge e of the ion and it also has the $e, -e$, internal charges that we described. And the external charge, is due to a frequency of radial oscillation of the ion f . And we consider that $e = 8.39 \times 10^{-19} \text{ Cb}$, is the minimum charge both internally of the atom and the ion atom and is not the only one.

THE ATOM OF HYDROGEN IN 1 ATM

The hydrogen atom, now, since $ef=I=1\text{Amp}_H$, will have two bubbles that will orbit with a frequency of $f=1/e=1/8.39 \times 10^{-19} = 1.19 \times 10^{18}$ Hz and $\omega = 7.49 \times 10^{18}$ rad/sec and $r/2 = c/\omega = 4 \times 10^{11}$ met. To $d = \omega^2 r^4 = 2.3 \times 10^{-3}$ and from the constitutive equation of the hydrogen atom,

The $m_b = kBe^2 = kB7.04 \times 10^{-37}$ kgr. $2E_b = E_p = m_p c^2 = 6.33 \times 10^{-20}$ kB. It is $\mu = I\pi(r/2)^2 = 5.02 \times 10^{-21}$ And $E_b = \mu B2\pi = 3.15 \times 10^{-20}$ B. And $k=1$, $E_p = 6.33 \times 10^{-20}$ B. And $B_p = 2.37 \times 10^9$ T. And $\mu = 0.3$.

Of the phenomenon called nuclear magnetism resonance, it was found, $\omega = 2\pi f = (e/2m_p)B_1 = 2\pi \times 42,577 \times 10^6$, and $B_1 = 1$ T. If we resolve, we will find $m_p = 1,568 \times 10^{-27}$ kgr. But we keep the value $m_p = 1,672 \times 10^{-27}$ kgr, which we also found for the atom at low pressure, considering that the mass of the atom is a constant and we take as correct the ω_E that results if we put this value in the formula. The difference $\omega_E = 0.937 \omega = 0.937 \times 2\pi \times 42.577 \times 10^6$ arises, since we consider that the frequency meters measure the frequencies with little inaccuracy.

THE 4 ENERGIES OF THE ATOM

The first is the electricity potential energy $E_d = kBe^2 d/r^2 = 3 \times 10^{-10}$ J. But there is also electricity energy, better electrical power, $W = VI$ and $V = kB_e d/r^2$, with $I = ef$. Electricity is $W = VI(t) = 3 \times 10^{-10}$ J, $t = T$. But electricity is consumed and the electricity that exists in it, which is powered by electricity potential, and we believe that electricity comes from zero, from which it is pumped and consumed as electricity.

But there is also the kinetic energy $E_b = 1/2 m_p c^2 = 7.5 \times 10^{-11}$ J. And from the constitutive equation of the atom, the magnetic dynamic electricity $E_{dm} = \mu_0 I^2 (r/2) 2\pi = 7.5 \times 10^{-11}$ J is derived. The magnetic energy is multiplied by 2π , because it belongs to B_c and not to B_p . The magnetic potential energy is pumped from zero and consumed as kinetic energy, better as kinetic power.

THE NEW UNIT SYSTEM

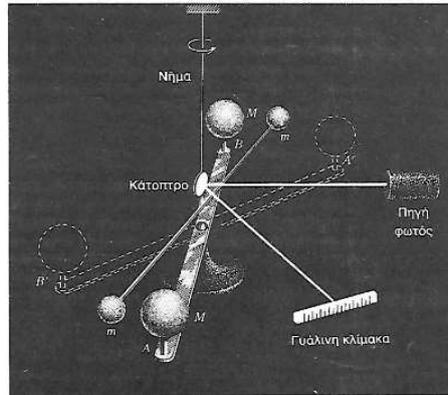
We accepted that $e_H = 8.39 \times 10^{-19}$ Cb_H. Relatively with the e physics accepted it, then $e_H/e = 5.23$. And $\text{Amp}/\text{Amp}_H = 0.19$. And $\text{Volt}/\text{Volt}_H = 5.23$.

In electrolysis, Faraday's constant $d = 96500$, must be multiplied by 5.23, the new constant.

CAVEDISH'S EXPERIMENT AND WHAT HE ACHIEVED

It was accepted by Newton, that the pull force is inverse of the square of the radius of the masses, and Newton claimed that he proved it in the moon-earth radius. Cavedish much later, took two metal spheres M still and two masses m tied to a yoke of rotary pendulum, approached

them to the two M spheres. Then began oscillation of the rotator cuff pendulum and period⁴ was 769 sec. He claimed to prove the law of the radius of the masses in the inverse square of the radius!



Σχ. 16-4 'Ο ζυγός του Cavendish, που χρησιμοποιείται για την πειραματική επιβεβαίωση του νόμου της παγκόσμιας έλξης του Newton. Οι μάζες m, m αναρτούνται από ένα νήμα. Οι μάζες M, M μπορούν να περιστρέφονται πάνω σ' ένα σταθερό στήριγμα. Ένα είδωλο του νήματος της λάμπας ανακλάται στο κάτοπτρο που είναι συνδεδεμένο στις m, m πάνω στην κλίμακα και έτσι οποιαδήποτε στροφή των m, m μπορεί να μετρηθεί.

But he proved the law in immovable masses M on the privileged system of the earth, with the oscillation of m.

When two masses revolve around their center of mass, they are both rotating and at the same time motionless towards each other! So the pulling power of the celestial bodies is⁵,

$$F(r) = (GMm/r^2) + (kMm/r^3) = m\omega^2 r$$

G is not itself applied to every attraction of celestial bodies, it is not constant. In the experiment Cavendish identified it $G = 6.67 \times 10^{-11}$ and weighed the earth and found $M = 6.6 \times 10^{24}$ kgr.

But he used the torque of the rotator cuff $M = D\theta$, and $D = \text{constant}$ of the pendulum and $\theta =$ angle of deflection of the pendulum. Here the established physics made a big mistake. The equation is $M = D$, because D has the dimensions of energy and the intrusion of the angle θ into the formula, leads to inconsistent dimensions of the formula, it must be removed since it is kinetic energy. And because θ was 3.96×10^{-3} radians and when it is extinct, then the earth is 252 times lighter. Then the core of the earth is fiery gas-plasma, surrounded with the mantle of liquid fiery materials and from the outside the crust.

SUMMARY

⁴ NATURAL Halliday-Resnick I, p. 389

⁵ It is qualitatively identical to that of the hydrogen atom that we will describe if the two bubbles that we perceive them with their movement as a pipelines, we equate them with attracted magnets, equivalent to the attraction of parallel currents. And the pulling force of magnets, is inverse of the square of their radius.

With the correct mathematics, it turns out that scientifically Ohm's law is not correct and the capacity and resistance of the coil proportional to the square of the load and the change of current respectively. A new theory of electricity is created.

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