

# OVERTURNING OF THE EXPLANATION OF THE LAW OF OHM AND THE REAL DIMENSIONS OF ELECTRICITY WITH THE PERFECT THEORY

ALEKOS CHARALAMPOPOULOS

## INTRODUCTION

With my spirit works at 2013 on the electricity, I renewed it and I got it better and I already am in the position to indicating in the science its errors. The law of Ohm is a short of electrical pressure that it is in force of the electric source, then it has the real voltage (electric difference potential) and specifically the voltage that physics accepted, corresponds to the root of the real voltage, as the root of the pressure of the fluid that is flowing in a pipe.

The integral of my visit in electricity, is becoming trying to formulate THE PERFECT THEORY. It was coming in the question, what relation has the electric potential of the atom, with the electric potential, the voltage of an electric source.

## METHODOLOGY

As every great theory, in natural philosophy theories of the ancient authers, in the mathematics and in physics, there are needing the principles, the definitions and the axioms.

Here, propositions of the theory are the velocity of the light which we defined  $c=47.3 \times 10^6$  met/sec in pressure of 8 mbar Neon gas, as, and that they are right measured, the wave lengths of the light. So, parallel propositions are the standard of the meter 1met and the unit of the time 1sec, as and the formula of Balmer, as it generalized, for the wave length of the radiation that is emitting the atom of hydrogen.

It is using the induction in methodology of growing up the theory, at all stretch.

## THE EXISTING OF THE ELECTRIC CURRIERS

A particle of the nature, probably is electric carrier, that is, it has electric charge. We symbolize with  $e$  the electric carrier and we are setting, that the electric current is flowing of this carrier, then the current is  $I=e/t$ .

In the atom of hydrogen where is beginning the matter and its elements, the electric carrier is cycling rotating around a center of mass, then it has current  $I=e/t$ . But  $t$  is the time and the cyclic rotation is becoming to a period  $T$ , then  $I=e/T=ef$ , and  $f$  is the frequency of the rotation of the particle (electric bubble of rare ether, according to my cosmic theory THE IDION<sup>1</sup>) and it is connected the direct current to the alternated current, that is, the which direct current, is high frequency alternated electric current.

We apply on the electric carrier an electric field and then,

$$eE=ma=m\Delta x/\Delta t^2 =eV/L$$

The  $V$  is the really electric potential, then it is in force the electric field  $E=V/L$ .

Then,  $V=k(m/e)v^2$  where  $k$  a constant and  $v$  the velocity of the shift of the electric current.

But<sup>2</sup> in a conductor with carriers  $N$ ,  $I=Ne/t=NeL/tL=Nev/L=NeAv/LA=NeAv/Vol$  and

$$v=I/neA$$

( $A$ =the section of the conductor of length  $L$  and volume  $Vol$ )

Then  $v=I/neA$  ( $n=N/vol$ ). And then,

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

## HOW THE VOLT-METERS ARE COUNTING

The volt-meters<sup>3</sup> are operating as the galvanometers, that is, as the ampere-meters. In ampere-meters the resistances are small, in small electric current, but in volt-meters they are large in small voltage.

So, as in the ampere-meters the indication of the size of current are gave, in the volt-meters they are operating with the law of Ohm, again the indication of the size of volts, are gave of the velocity of the electric current, (the stated physics accepted). This velocity reacts the electric magnets of the ampere-meters and the volt-meters and they are declined so they are giving the size of the current, or the voltage (OHM law). See an ampere-meter in plan 1 (Wikipedia), the current passes through the coil, and it is in the magnetic field the indicator, and it declines then it is passed the current and it is graduating the declining, depending on the velocity of the electric current.

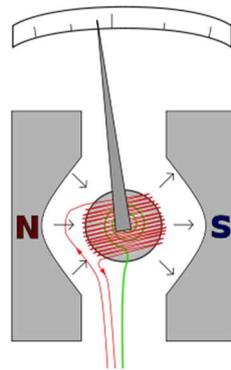
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<sup>1</sup> THE TOTAL THEORY, International Journal of Mathematics and Physical Sciences Research, Apr2020-Sept2020

<sup>2</sup> PHYSICS Halliday-Resnick, p. 127

<sup>3</sup> PHYSICS Alkinoos Mazis, p. 137

## PLAN 1



Ampere meter

The ampere-meter is going in the series in the electric circuit, that is, we cut the conductor and we are connecting the two edges with the electrodes of the ampere-meter. So, if we interfere in the circuit in series a resistance R, the current falls, because the velocity of the current it is flowing in the conductor, is folded again.

But the electrodes of the volt-meter, are tangent in two pieces of the same conductor, that is, they are inserted in parallel to the conductor. So, when the resistance is between the tangent electrodes on the conductor, into which it is falling the velocity of the current and the same the current and the voltage. Then the current is in short circuit (when the electrodes are tangent parallel to the conductor) and then the electric pressure is big, big and different the velocity of the current (from this current of the ampere-meter) and the graduated volt-meter, gives this is indicated as voltage.

## WHAT IT IS THE VOLTAGE OF THE LAW OF OHM

An electric source, a battery i.e., it has an electric potential, it is this we gave it,  $V=k(m/n^2e^3A^2) I^2$ . This electric potential, is in force an electric pressure for the electric fluid of the current, when the circuit is closed.

The natural equivalent model, is the pressure of the fluids. The electric current it has velocity  $v$ , is like the velocity of the water  $v$  in a pipe. In the pipe there is a pressure difference  $p$  and there is the flowing of the water. As we showed, in the current we have a potential of voltage difference, or voltage and in the flowing of the water in the pipe, we'll have a pressure difference  $p$ , that is,

$$p_2 - p_1 = \Delta p = (F_2 / S_2) - F_1 / S_1 \quad \text{and}$$

$$\Delta p = \frac{m \frac{\Delta x_2}{\Delta t^2} b \Delta x_2}{b \Delta x_2 S_2} - \frac{m \frac{\Delta x_1}{\Delta t^2} b' \Delta x_1}{b' \Delta x_1 S_1} = \frac{b m v_2^2}{Vol_2} - \frac{b' m v_1^2}{Vol_1} = b \rho v_2^2 - b' \rho v_1^2$$

Where  $b \Delta x = L$  = the length of the flowing of the fluid in the pipe, at  $\Delta t$  and  $\rho = m / Vol$ ,  $Vol$  = the volume of the flowing in  $\Delta t$ . And,  $p_1 + b \rho v_1^2 = p_2 + b' \rho v_2^2$  and the pressure difference is  $\Delta p$ , and if  $v_1^2 = 0$  as in a large tank of water, where the water come in the conductor, then,  $\Delta p = b' \rho v_2^2$ .

According to the law of OHM,  $V_{OHM}=RI=R(neA)v$ . That is the law of OHM is up to the electric pressure of difference, as we were showed. And because the voltage  $V_{OHM}$  of the law of OHM is analogue to the velocity of the current, then this is corresponding in the root of the electric real voltage, as in the pressure  $\Delta p$  of the corresponding fluid.

And,  $\Delta p^{1/2} = ((V_{OHM}/R)=I=v(nea)) =/(b' \rho)^{1/2}v$  corresponds to the electric pressure that the law of OHM is indicating, only in the reality it is analogue of the root of the real voltage, this we are indicating as it is true.

## WHAT IS THE ELECTRIC PRESSURE

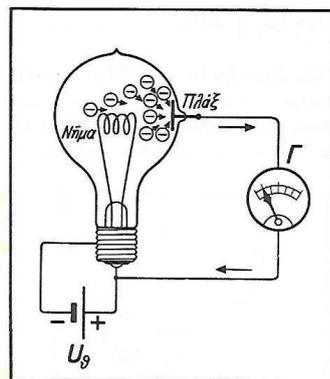
The electric current is flowed of the atoms of the conductor. The atoms are oscillated in relation with the passed current and so we have electric energy. In the harmonic oscillators as they are the atoms, there is potential energy, and it is equal to the kinetic. And the flowing of the electric energy, is the changing of the potential energy and the equal kinetic. We are setting then, the special electric energy, as  $E=(mv^2)/Vol=\rho v^2$ . Then in the  $\Delta p=\rho v^2$  the  $(\Delta p/\rho)^{1/2} = v$ . The special electric energy of the oscillators, is in force the electric pressure  $\Delta p$ .

## HOW ELECTRONS AND PROTONS WERE ACCEPTED

The “proof” of the existence of the electrons, was done by Edison, who was constructing the fire lamp. He has all the responsibility for the creation of physics.

In a fire lamp, he put metal plate into the lamp, and he made electric voltage between the fire filament of Tungsten, and the plate, as in the plan<sup>4</sup>. It was observing flow of direct electric current.

Plan 2



Σχ. 438. Όταν η πλάκα συνδέεται, μέσω του ευαίσθητου γαλβανομέτρου, προς τον θετικόν πόλον πηγής συνεχούς τάσεως, τὰ ηλεκτρόνια κινούνται ἐκ τοῦ διαπύρου νήματος πρὸς τὴν πλάκα.

<sup>4</sup> ELEMENT OF PHYSICS, ELECTRICITY, p. 419

Edison supposed that the fire filament emits electrons and so, it was “proved” the existence of electrons.

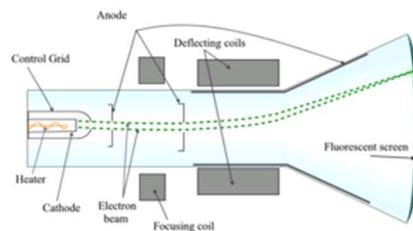
As we all know the fire filament emits photons, in infrared , lighting and ultra violet spectrum. The photons are of high frequency electromagnetic waves, that is, high frequency alternating currents. They are falling in the metal plate as they are gained some energy of the electric voltage and they cause the direct electric current. The high frequency alternating current, over the infrared frequency, in the atoms of the electric conductor they have it, it is the direct current.

I don't think that I'll be original, but the stated physics accepts the formula,  $I=ef$ , that is, the direct current is equal to the product of the rotated electric charge, to the rotating frequency. So, in the Edison effect , the direct current was observing , is high frequency oscillation of the atom of the conductor, it is caused of the oscillation of the photons.

So, there are not electrons, or protons that they are following them.

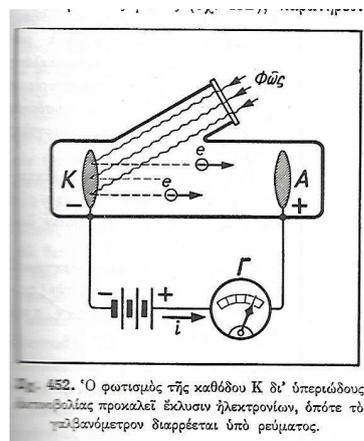
See the cathode rays tube in following plan. The cathode, usually, is consisted of Tangsten filament, in which large electric current (5-7 Amp) and it is heated (there is and cold cathode). The cathode emits photons they are passing in processing anodes. The anodes react in the structure of the photon, (it is two cyclic currents they are oscillating). With the anodes reactions, they are increased the distances of the electric rings and then, they are passing into the capacitors (or into the magnetic fields, or magnetic and electric field) and they are aberrated of the line proceses.

Plan 3



But, see and the photoelectric effect,

Plan 4



The light is falling to the cathode, which emits photons, but now there is a potential difference, as in the previous examples and it is creating a weak current.

## THE VELOCITY OF THE LIGHT

They used in the PHYSICS NATIONAL LABORATORY in England, electromagnetic cavity and they had success in coordination in the frequency  $f=9.4983 \times 10^8$  Hz, in the electromagnetic cyclic cavity<sup>5</sup>. The cavity was cyclic with radius  $r=3.25876$  cm and length  $d=15.64574$  cm. As you are informed, the electromagnetic wave has electric field  $E$  and magnetic  $B$ . From the law of the radius in the reverse cubic power we found, the electric field is,  $E=e/d\pi r^2$  and the magnetic,  $B=\mu_0 I/2\pi r$ ,  $I=ef$ . And,

$$E/B = 2/df\mu_0\epsilon_0 = 0.35949$$

If in the cavity they had coordination and in same time the two edges of the cavity they were bonds of the wave, the wave is happened in  $2d$  distance, that is, it begun and came back to the start of the cavity of length  $d$  and then the velocity of the electromagnetic wave was  $c=2df=(4/r\mu_0)(B/E)= 297.215 \times 10^6$  met/sec. This velocity is near to the physics accepted.

BUT, the electromagnetic waves in the cavity, they are two opposite electric rings of the wave, they formed electric current vertical to their passing and the cavity. This electric current formed cyclic magnetic field on itself around, the  $B=\mu_0 I/2\pi r$ . This magnetic field was up to the cavity, only in radius  $r$ . So, the magnetic field on the walls of the cavity, is  $B=\mu_0 I/r$  and the velocity of the light  $c=297.215 \times 10^6 : 2\pi = 47.3 \times 10^6$  met/sec.

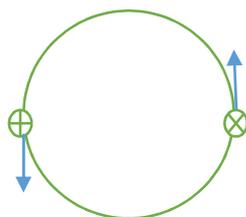
## THE PERFECT THEORY AND THE ELECTICITY

I am giving elements of THE PERFECT THEORY OF THE PHYSICS that I am going on, to help us in the formulating of the electric sizes.

May be you are informed of the theory of Bohr for the hydrogen atom. It is accepted an electric field of the nucleus  $E=-k/r^2$  and the electric potential  $V=-k/r$ . In my processed theories of atom of hydrogen that I am developing, rather we are reached in the final position, that is, THE PERFECT THEORY. This electric potential  $V$ , I tried to reconcile with the  $V_{OHM}$  and it coming on this theory.

In THE PERFECT THEORY, as in them I made and they are finishing here, the hydrogen atom is consisted of two same bubbles of rare ether, they are rotated around the center cyclically and because their movement differs on  $\pi$  angle, they are opposite electric carriers, or as you are informed, they have opposite electric charge. But the electric charge is  $e^2=m$ , in the atom of hydrogen and  $m$  the mass of the one bubble from the two of the atom.

PLAN 5




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<sup>5</sup> PHYSICS Halliday-Resnick , p. 357, example 3

In the plan 5 the two charges, are opposite and they are rotated around the center of their mass. They are attracted because they have opposite charges, but they have magnetic attraction, because they are behaved like parallel conductor of electric current. We are stopping at the time the existence of the charges we are informed, and the mass. It is satisfying the equation, for any bubble,

$$a=\omega^2(r/2)=v^2/(r/2)=\frac{\frac{8}{3}\pi v^2 r^2}{\frac{4}{3}\pi r^3}$$

In this atom and in the first state of hydrogen and in all states, the velocity of the rotation is  $v=c$ , the atom with the two bubbles is a bonded photon. Of my experiments <sup>6</sup> and more right calculation of this I made<sup>7</sup> it is  $c=47.3 \times 10^6$  met/sec. But, as we are accepted that the length of the light is counted right, as in hydrogen, but with empirical formula of Balmer, we are finding, that the wave of rotation of the bubble in the first state, is  $\lambda_1=91.11$  nm and it is consequent the  $r/2=\lambda/2\pi= 1.45 \times 10^{-8}$  met. The lengths of emit of the hydrogen, was from atom of hydrogen in 8 mbar pressure. Then we are finding  $\omega_1=3.262 \times 10^{15}$  rad/sec,  $f=5.19 \times 10^{14}$  Hz. The empirical formula of Balmer<sup>8</sup> for the second row of the emit waves of the hydrogen atom is,

$$\frac{1}{\lambda} = R \left( \frac{1}{2^2} - \frac{1}{n^2} \right) \quad R=1,097 \times 10^7 \text{ met}^{-1}$$

We are here formulating, as we prove bellow, that the empirical formula of Balmer and the generalized corresponding formula, it corresponds to the states of the radius of different atoms of hydrogen and not of the same atom.

Then the charge in my theory till here is,  $e=\sqrt{\frac{8}{3}\pi v^2 r^2}=3.97 \text{ met}^2 \text{sec}^{-1}$

But the electric field is,  $E=\frac{\sqrt{\frac{8}{3}\pi v^2 r^2}}{\frac{4}{3}\pi r^3}$

I come up, as it is formulated in the OVERTURNING OF INFINITESIMAL CALCULUS AND RESTORATION OF THE SUPERIOR MATHEMATICS<sup>9</sup> in the acceleration of the two bubbles (and the integral we are symbolized with  $C^{-1}(r)$ ) and then it is,  $C^{-1}(c^2/r/2)(r)=c^2/2$ . For the atom of the two bubbles, the integral is  $2C^{-1}(r)=c^2$ . This velocity corresponds to the kinetic energy and the  $cr/2$ , corresponds to the angular momentum and  $c^2:cr/2= 3.262 \times 10^{15}$  rad/sec, we were finding.

## THE MEANING OF THE ELECTRIC POTENTIAL OF THE ATOM

The electric potential is,

<sup>6</sup> In a pipe Neon of pressure 8 mbar in length of the electrodes 21 cm connected with PLL, when the frequency of the PLL reached on 114.4 MHz, the voltage of the electrodes increased rapidly. The length of the wave was  $2 \times 21=42$  cm.

<sup>7</sup> See, THE ABSOLUTE THEORY OF PHYSICS International Journal of Mathematics and Physical Sciences Research, Apr2020-Sept2020

<sup>8</sup> ELEMENT OF PHYSICS III, Peristerakis-Kouyioumtzelis, p, 518

<sup>9</sup> International Journal of Mathematics and Physical Sciences Research, Oct2020-Mar2021

$$V = Er = \frac{\sqrt{\frac{8}{3}} \pi cr}{\frac{4}{3} \pi r^2} = (3/2\pi)^{1/2} c/r = (3/2\pi)^{1/2} \omega. \quad E = \text{the electric field.}$$

That is meaning the electric atomic potential in THE PERFECT THEORY, has dimension of cyclic frequency, it is vector as the magnetic field and here,  $V = 1.123 \times 10^{15}$  rad/sec =  $\omega$  and  $f_v = 1.787 \times 10^{14}$  Hz. Of course, we are speaking for the electric potential, as we are analyzing till here, in THE PERFECT THEORY OF PHYSICS. And it is units of angular frequency.

### THE EQUIVALENT CURRENT

It is,  $I_v = ef_v = 7.09 \times 10^{14}$  met<sup>2</sup>/sec<sup>2</sup> =  $0,317c^2$  ( $\tau c = 47,3 \times 10^6$  met/sec). But as we proved above,  $c = I/neA = IL/Ne$ , in the atom of hydrogen, where  $Vol = AL = L\pi(r/2)^2$ ,  $n = N/Vol$ . Then,

$eV = I_v = 7.09 \times 10^{14} = 0,317c^2 = 0.317(1/n^2 e^3 A^2) I^2 = 0,317(L^2/N^2 e^3) I^2$ . This formula is in force, when in the atom  $eV = I_v = 2\pi fe$ . ( $N=1$  in the atom, it corresponds to one bubble).

If you solve this equation, you'll find  $I = 2.05 \times 10^{15}$  met<sup>2</sup>/sec<sup>2</sup> and then  $f = I/e = 5.17 \times 10^{14}$  Hz.

But, as we were solving the equation for the atom, we found the size of the constant  $k = 0.317$ .

See now,  $V = k(1/n^2 e^3 A^2) I^2 = k(1/n^2 e^3 A^2)(V_{OHM}^2/R^2) = k(L^2/N^2 e^3)(V_{OHM}^2/R^2)$ .

$N/L$  is the linear density of the electric oscillators of the conductor. Because the electric potential, is equal to the electric potentials (as electric dipoles) in linear series (they are added the potentials of the dipoles, in linear direction) and it not depended of the parallel potentials, then the  $N/L = 1/b$ ,  $b = \text{constant}$  and,

$$V = 0.317b^2(1/e^3)(V_{OHM}^2/R^2)$$

$$V/V_{OHM}^2 = 0.317b^2(1/e^3)/R^2$$

But you record that the  $R$  of the atom, because the 1 Ohm is arbitrary and the standard is kept in the Bureau and Standards  $\eta\zeta$  N.Y. it is not right calculated, it is not related with the units of the sec, met.

We generalize then the formula we found and for the atom or the macro-cosmos is in force,

$$V = k(L^2/N^2 e^3)(V_{OHM}^2/R^2)$$

Because  $R = R_s L/A$ ,  $R_s = \text{the special resistance}$ , then,

$$V = 0.317 (A^2/N^2 e^3 R_s) V_{OHM}^2 .$$

Of course, as you read THE ABSOLUTE THEORY OF THE PHYSICS, it must not avoid,  $m = e^2$  for the one bubble, or as you are accepted that the one proton of the state physics, is in force the same. The above formula is depended on the special resistance and the section  $A$  of the conductor, and the density  $n$  of the electric carrier in the conductor.

BUT WE WERE ACCEPTED ELECTRIC CHARGE  $e_b^2 = m_b$

For the atom of hydrogen, it is in force the law of attraction, that we were already accepted in the ABSOLUTE THEORY OF PHYSICS, that is,

$$\left(\frac{1}{2}\right)^2 \frac{\pi r^2 c^2}{\pi r^3} e_b^2 + \mu_0 (e_b f)^2 2\pi(r/2)/2\pi r = m_b \omega^2 (r/2) \quad \text{that } e_b = \text{the charge of the one}$$

bubble, ( $I_{\text{unit}}/f = 1.93 \times 10^{-15} = e_b$ ). Where  $e_b f = I_{\text{unit}}$  the electric current it has a rotated bubble, and it is acceptance and it corresponds to the first state of hydrogen and the  $\frac{1}{2}$  in the beginning of the formula, comes in because,  $\left(\frac{1}{2}\right)^2 \frac{\pi r^2 c^2}{\pi r^3} e_b^2 = \mu_0 (e_b f)^2 / 2$  (of my calculations) and  $m_b =$  mass of the bubble. Of the  $2\mu_0 (e_b f)^2 / 2 = m_b \omega^2 (r/2)$  we find  $\mu_0 = 0.45 \mu'_0$ ,  $\mu'_0$  the price is of the stated physics.

It is,  $e_b = I_{\text{unit}} / f = 1.934 \times 10^{-15}$  which is the charge of the bubble and of course the  $e_b$  is different of the  $e_p$  of the proton of the stated physics.

Now the electric potential  $V$ , as we were already made before, when we multiplied to  $e$ , we'll multiply to  $e_b$  and,

$$e_b V = \left(\frac{1}{2}\right)^2 \frac{\left(\frac{8}{3}\pi\right)^{1/2} r c}{\pi r^2} e_b = 0.54 I_{\text{unit}}$$

And,  $e_b V = I_V = 0.317 c^2 e_b$ . It is in force,  $e_b = 1.93 \times 10^{-15}$ .

Now already,  $I = Ne_b/T = Ne_b L/LT = Ne_b v/L = Ne_b v A/Vol$ , and  $v = I/ne_b A$  ( $v=c$  in the first state of hydrogen and the others), and,

$$e_b V = 0.317 \frac{e_b I^2}{n^2 e_b^2 A^2} \quad \text{and} \quad V = 0.317 \frac{I^2}{n^2 e_b A^2}$$

This is the electric potential for the hydrogen atom, where we replace  $n = N/LA$

And for the atom of hydrogen that it has two bubbles,  $I = 2 \times 1.93 \times 10^{-15} \times 5.19 \times 10^{14} = 2 \text{ Amp}_A$  and for  $e_b = 1.93 \times 10^{-15} \text{ Cb}_A$ ,  $L = 2\pi(r/2)$ , then  $V_A = 5.49 \text{ Volt}_A$ ,  $m = e^2$ , (we can put  $\text{kgr}_A$  and not  $\text{kgr}$ , because the  $\text{kgr}$  is not pair with the units sec, met, in the same metric system, as  $\text{Amp}$ ).

If you are accepted  $2e_b^2 = m_A = 7.44 \times 10^{-30}$  unit of mass, then unit of mass =  $\text{kgr}_A = m_p/m_A = 224.435 \text{ kgr}$ . And unit of charge  $\text{Cb}_A$  because  $e_b = 1.93 \times 10^{-15}$ ,  $\text{Cb}_A = e/e_b = 82.9 \mu\text{Cb}$  (here the  $e = 1.602 \times 10^{-19} \text{ Cb}$ ),  $\text{Amp}_A = 82.9 \mu\text{Amps}$ . The  $\text{Cb}_A$ ,  $\text{Amp}_A$  and the  $\text{kgr}_A$ , are paired to the sec and the met, in the right system of units, where they are proposed the units sec, met. The units  $\text{Cb}$ ,  $\text{Amp}$ ,  $\text{kgr}$ , sec, met are arbitrary and not connected between them, while the right system, it proposes the arbitrary units sec, met and then all units are coming from them.

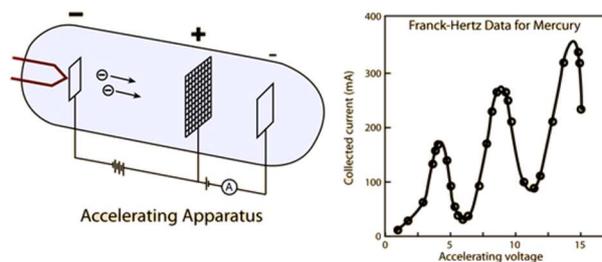
But the charge  $e = 1.602 \times 10^{-19} \text{ Cb}$  was determined in the experiment Millikan which was becoming in the pressure of one atmosphere for the drops of oil, but the estimation  $e_b = 1.93 \times 10^{-15} \text{ Cb}_A$  was becoming of the PERFECT THEORY, it is using the waves that it emits the hydrogen atom, then it is in pressure 8 mbar.

## THE EXPERIMENT FRANK-HERTZ

With the experiment Frank-Hertz they are identified the energy states of the hydrogen and others elements<sup>10</sup>. That is, the 13.55 electron-Volts of the first state of the hydrogen, as and the others states, they are identified of this experiment.

In the plan 6 there is the apparatus of the experiment (better than the apparatus of Frank-Hertz). Heated cathode, emitted as they believed, electrons (canon of electrons). They were coming in a chamber that it consisted gas as hydrogen (at first they had vapor of Mercury). The chamber of the gas, was made of conductive material and it was all in the same electric potential, so in the gas the electric field was zero. In the canon of electrons they put a small electric voltage, from 1-14 Volts. In the chamber of the gas and opposite of the hole of the entrance of the electrons, there was a hole of exit. The hole of exit was not in direct line with the canon and of entrance hole, because, as the said, the electrons of exit of the chamber, do not coming from the canon, but of the reflections of the entrance electrons, at the exciting of the electrons of the hydrogen, where they were conflicted the incoming electrons

Plan 6



Experiment Frank- Hertz

When in the canon of electrons, the voltage was 13.55 Volts, then the existence of the electrons to the exit, was zero. When they increased some more the voltage V, they observed a small flow of electrons and they supposed that the small kinetic energy, is equal to the difference  $e(V-13.55)$ . With strong experiments, they were identified at the energy states of the electrons of the hydrogen and others elements.

But, as we already formulated, the heated cathode where usually consisted of Tangsten filament, it emits photons, especially super violet or radiation x. The frequency of the photon was moderated of the electric potential in the canon, (we already indicated to you that the electric voltage corresponds to the angular frequency and here it reacts at the frequency of the photons, according to its height) and then the radiation is coordinated to the frequency of the rotation of the bubbles of the atom of the hydrogen and it ionizes the atom. Specially, in the exit of the ions (them they said electrons the physicists) they applied negative voltage and they do the flowing zero, Then, sure, they are ions<sup>11</sup>, but not electrons. IT IS MEANING THAT THE CONFLICTION OF THE SUPER VIOLET PHOTONS WITH THE BUBBLES, IONIZES THE GAS. And they change it in ion, separated the diatomic molecule of the hydrogen, that it coming in the chamber of the gas. The ion, is in reality the one of the two atom

<sup>10</sup> PHYSICS PSSC, Shaim-Dodge-Walter, p. 551-560

<sup>11</sup> Ions are the oscillated atoms, in radius changing ( $r=A\cos(\omega t+\theta)$ ), and they are negative. The positive ions have  $r=A\cos(\pi+\omega t+\theta)$

of hydrogen and especially, from the pressure of the frequency of the photons, it was given this frequency to the atom. So, these bubbles, now they have the frequency of the atom rotation and the same radius frequency. And because the frequency of the photon that it is given the radius oscillation of the bubbles, it was coming on of the phases of oscillation, they are correspond to the negative charge of the atom totally, that it is now ion. With the photon fixed charge of ion, it fixed the ion of hydrogen.

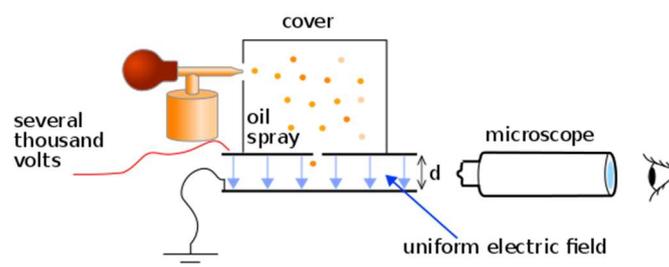
SO THE FORMULA OF BALMER IS FIXING DIFFERENT ATOMS OF GAS, and every atom has different state of radius and energy and everyone is ionizing (not excited). Because  $f=v/\lambda$  and the  $\lambda$  is changed according to the formula of Balmer, then the velocity  $v=c$  of the rotating in the atom bubble is constant and the frequency is changed in reverse of the wave. And because  $r=v/2\pi f$ , then the radius is changed same to the wave. Because the frequency of rotation  $f$  is changed, we have not a least quantum of the charge.

Because the electric potential in the first level of the hydrogen in the experiment Frank-Hertz was  $V_{OHM} = 13.55$  Volts and in the atom we analysed, for the first level  $V_A = 5.49$  Volt<sub>A</sub>, then Volt<sub>A</sub> = 2.468 Volts. This relation, is up to low pressure of the first level of the experiment Frank-Hertz, (where the pressure was low), as low is the pressure of the hydrogen where it is fixed the  $V_A$  and it was calculated of the radiation of the hydrogen, that it happens in low pressure. So, the formula of the units of the voltage is attached to the real. But the  $V_A$  is the real voltage, that it corresponds in the square power of the current, but the  $V_{OHM}$  corresponds to the current, according to the law of OHM.

### THERE IS NO QUANTUM CHARGE

Physicists argued that the existence of quantum charge  $e = 1.602 \times 10^{-19}$  Cb it was proved of experiment of Millikan. But in reality, the experiment proved the dispersion of the charge.

Σχήμα 7



Millikan took spray of oil and he blew up oil drops, which they were fallen in a small hole of a capacitor. The friction of the drops, created their electric charges. He observed the falling of the drops without electric field in the capacitor<sup>12</sup> and he measured the falling velocity. After he applied electric field of some thousand Volts in the capacitor and the velocity became reversed, it was up course. BUT THE VELOCITY OF THE DROPS WERE DIFFERENT AND

<sup>12</sup> MODERN PHYSICS, R. Serway

VARIOUS for the same voltage. That means that there was different charges on the drops. They interpreted the experiment, that the charge of the oil drops, was multiplies of an element quantum charge. In reality it is, that because the charge is reverse of the frequency of the atom oscillation (radius or rotating), where, now is ion of the radius oscillation, it is not a least quantum charge. In the experiment, we have same conditions of friction for the oil drops, where maybe they are some different in the size, but it is ionized the same the atom. The molecule of the oil has the more atoms of hydrogen and rather atom, or atoms of hydrogen were ionized with the same way, as the ionization of the hydrogen in the experiment Frank-Hertz .

In the experiment Millikan the pressure was of an atmosphere, but in the experiment Frank-Hertz the gas of hydrogen was in large vacuum, maybe 8 mbar where it is lighting. Because of the small pressure of the gas, its atoms have larger radius than the others, and of course ionized state, they have different frequency of rotation or radius, that is, different charge. So, because in the experiment Millikan the pressure was normal, the measured charge is not corresponding to the charge of hydrogen in small pressures.

## SUMMARY

The real electric voltage is different of the accepted of physics. The accepted corresponds to the velocity of the current, or on the size of the current and the real corresponds to the velocity of the current in the square power, or in square power of the current.

The electric potential of the atoms, as the hydrogen, corresponds to the units of angular frequency of the bubbles of the atoms and in the voltage of electricity. There is corresponding with the voltage the stated physics accepted.

The direct current because of the atomic formula  $I=ef$  has high frequency and that the heated cathodes emit photon high frequency, that they, the direct current measured i.e. in photo cells.

In the experiment Frank-Hertz where they determined the states of energy of the atoms, they were emitted from the heated cathodes photons, that they were moderated in voltage 1-15 volts and after they were conflicted with the atoms of gas in low pressure. The gases ionized and the generalized formula of Balmer, corresponds to the one state of the atom. Every level and the formula reflects many atoms, everyone with a level which identified the formula of Balmer.

So, every atom has its own level and not an atom all the states. And the electric charge is not a least, but they are many charges. And the experiment Millikan, in reality proved the existence of many charges in an atom, as the ionized oil drops probably corresponded to the ionization of their hydrogen atoms.

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