

Science from History to Future

1. INERTIA

2. Form of the interference field

3. CORRECTED Maswell's equations

4. Corrected Newton's Laws of Motion

5. Kinetic energy of a charge moving at the velocity of v has two different values:

Kinetic energy against direction of motion as wave

$$T_{kin ad} = mc^2 [\ln |1+v/c| - (v/c)/(1+v/c)]$$

Kinetic energy in direction of motion as particle $T_{kin id} = mc^2 [\ln |1-v/c| + (v/c)/(1-v/c)]$

• 1. INERTIA

- **Inertial motion is an intrinsic property of matter. But no Newton's, no Einstein's linear motion is an intrinsic property of matter. Inertial motion is only quasi-circle. It is Galileian's motion**
- **The atomic theory shows that the electrons and the nucleus circulate around the center of gravity of atom in approximate circles. The body rotating around its own axis (a flywheel) persists in this status.**
- **Similarly, the planets, stars, galaxies, molecules, nuclei and elementary particles rotate around their own axes. Since the uniform straight-line inertial motion cannot be achieved in a microworld, its place here is exclusively in the inertial quasi-circle motion. It is analogous in the macroworld. Each real "straight-line" motion can be replaced by a circle of a huge radius. This discussion results in the following:**
- **"Every mass (atom, molecule, particle, body, vacuum) persists in the status of the quasi-rest or quasi-uniform motion in a quasi-circle as far as it the external forces do not force it to change its status. (This notion is called the generalized law of inertia)."**

- **1.1 Newton** in his book "Mathematical Principles of Natural Philosophy":

Every body continues to rest in a state of rest or a uniform and rectilinear movement, until and because it does not force the forces applied to change this state.

In an rotating frame of reference the law of inertia is allegedly incorrect, therefore the Newtonian formulation was replaced by the postulate of the existence of inertial frames of reference (by EINSTEIN !!!).

Galilei's, Newton's, Einstein's movement "along a straight line" is a circle with radius 6378 km!!

No real motion can be straight-line one. It is only mathematical definition.

Mathematics is NO PHYSICS !!!

The postulate of the existence of inertial frames of reference does not belong to physics. Neither postulate does not belong to physics.

Physics is based on experiments and not on postulates.

"The difference between a good experiment and a good theory is in the fact that the theory gets old quickly and it is replaced by another one, based on more perfect ideas. It will be forgotten quickly. The experiment is something else. The experiment, which has been thought well and performed carefully, will step in the science forever. It will become its part. It is possible to explain such experiment differently in different periods of times."

P. L. KAPICA

- **1.2 Galileo Galilei**

The first law (the law of inertia), in a less clear form, was published by Galileo. It should be noted that Galileo allowed free movement **not only along a straight line, but also along a circle (apparently from astronomical considerations)**. Galileo also formulated the most important principle of relativity

- 1996: Let's have a real coordinates system firmly connected with a real laboratory on Earth, where all experiments testing the physical theories are performed. We know that this coordinates system moves around the Earth axis during an astronomical day i. e. it performs a quasi-circular motion. During the year it rotates around the Sun approximately in a quasi-circle together with the Earth. During $2 \cdot 10^8$ years it circulates in the quasi-circle around the center of the Galaxy. It performs a quasi-uniform motion in a quasi-circle together with the Sun.
- The Galaxy performs a quasi-uniform and quasi-circle motion around the center within the framework of metagalaxies of star clusters and our laboratory coordinates system on Earth together with it, etc.
- From the experimental testing of the law of inertia it is known that the body moves along the "plane" stated by a waterlevel, i. e. in fact it is not a straight-line uniform motion, but it is the motion in the circle of the Earth radius of $R=6378$ km.
- The space aeronautics show that space ships, Earth satellites and orbital laboratories move quasi-uniformly in almost a circle around the Earth.

CORRECTED Maswell's equations

Let us take the equation (2.20) in the vector form:

$$E_{mov} = E_{still} \left(1 - \frac{v}{c} \cos \vartheta \right)^2$$

The force acting on the moving electric charge is

$$F = QE_{mov} = QE_{still} \left(1 - \frac{v}{c} \cos \vartheta \right)^2 = QE_{still} \left(1 + \frac{v}{c} \sin \phi \right)^2 =$$

$$= QE_{still} + QE_{still} \left(2 + \frac{v}{c} \sin \phi \right) \frac{v}{c} \sin \phi$$

whereby

$$-\cos \beta = \sin \phi$$

It is known, in line with the classical theory, that a magnetic field is created by the moving charges and electric currents. The result is that the moving charge creates its own magnetic field of induction B_q . It continues in this field in motion. According to Lorentz, the force acting on the moving charge in the electromagnetic field at speed v in the magnetic field of induction B and in the electric field of the following intensity E it is valid:

$$F = F_{el} + F_m = QE + Q(v \times B) \quad (2.23)$$

Let us compare the equations (2.22) and (2.23).

Intensity E of the electric field according to Lorentz equals to our intensity E_{still} .

$$F = F_{el} + F_m = QE + Q(v \times B)$$

CORRECTED Maswell's equations

Since the forces acting on the moving charge are the same, the equation applies

$$\mathbf{E}_{\text{still}} \left(2 + \frac{v}{c} \sin \phi \right) \frac{v}{c} \sin \phi = \mathbf{v} \times \mathbf{B} \quad (2.24)$$

With regard to the fact that both the direction $\mathbf{E}_{\text{still}}$ and the direction of the vector $\mathbf{v} \times \mathbf{B}$ are identical, for the absolute values it is possible to write

$$E_{\text{still}} \left(2 + \frac{v}{c} \sin \phi \right) \frac{v}{c} \sin \phi = v \cdot B \cdot \sin \phi$$

i.e. $B = \frac{E_{\text{still}}}{c} \left(2 + \frac{v}{c} \sin \phi \right)$ $\mathbf{v} \times \mathbf{B} = \mathbf{E}_{\text{mov}} - \mathbf{E}_{\text{still}}$

$$\mathbf{E}_{\text{mov}} = \mathbf{E}_{\text{still}} + \mathbf{v} \times \mathbf{B}$$

The intensity of moving charge comprises in itself also the magnetic field induction B created by the charge moving at speed v .

Based on $\mathbf{E}_{\text{mov}} = \mathbf{E}_{\text{still}} + \mathbf{v} \times \mathbf{B}$

Maxwell's equations which are always valid (not only in static) acquire the form:

$$\nabla \mathbf{E}_{\text{mov}} = \nabla (\mathbf{E}_{\text{still}} + \mathbf{v} \times \mathbf{B}) = \nabla \mathbf{E}_{\text{still}} + \nabla (\mathbf{v} \times \mathbf{B}) = \frac{\rho}{\epsilon_0} \quad \text{Gauss law } \left(\nabla \mathbf{E}_{\text{still}} = \frac{\rho}{\epsilon_0} \right) \quad \nabla \mathbf{B} = 0 \quad \text{are no magnetic charges,}$$

$$\nabla \times \mathbf{E}_{\text{mov}} = \nabla \times [\mathbf{E}_{\text{still}} + (\mathbf{v} \times \mathbf{B})] = \nabla \times \mathbf{E}_{\text{still}} + \nabla \times (\mathbf{v} \times \mathbf{B}) \quad \nabla \times (\mathbf{v} \times \mathbf{B}) = v(\nabla \mathbf{B}) - \mathbf{B}(\nabla v)$$

$$\nabla \times \mathbf{E}_{\text{still}} = 0 \quad \nabla \cdot \mathbf{v} = \frac{\partial}{\partial t}$$

$$\nabla \times \mathbf{E}_{\text{mov}} = -\frac{\partial \mathbf{B}}{\partial t}$$

Faraday's law

$$\text{Amper's law in statics: } c^2 \nabla \times \mathbf{B}_{\text{stat}} = \frac{\mathbf{j}}{\epsilon_0} \quad \text{Total magnetic field: } \mathbf{B}_{\text{dyn}} = \mathbf{B}_{\text{stat}} + \mathbf{B}_Q$$

$$\mathbf{B}_{\text{dyn}} = \mathbf{B}_{\text{stat}} + (\mathbf{B}_{\text{dyn}} - \mathbf{B}_{\text{stat}}) = \mathbf{B}_{\text{stat}} + \mathbf{B}_Q$$

$$\mathbf{B}_Q = \mathbf{B}_{\text{dyn}} - \mathbf{B}_{\text{stat}}$$

$$c^2 \nabla \times \mathbf{B}_{\text{dyn}} = c^2 \nabla \times \mathbf{B}_{\text{stat}} + c^2 \nabla \times \mathbf{B}_Q \quad c^2 \mathbf{B}_Q = (\mathbf{v} \times \mathbf{B}_Q) \times \mathbf{v}$$

The 4th Maxwell's equation:

$$c^2 \nabla \times \mathbf{B}_{\text{stat}} = \frac{\mathbf{j}}{\epsilon_0} \quad \nabla \times [(\mathbf{v} \times \mathbf{B}_Q) \times \mathbf{v}] = (\mathbf{v} \times \mathbf{B}_Q)(\nabla v) - v[\nabla(\mathbf{v} \times \mathbf{B}_Q)] =$$

$$= \frac{\partial(\mathbf{v} \times \mathbf{B}_Q)}{\partial t} = \frac{\partial(\mathbf{E}_{\text{mov}} - \mathbf{E}_{\text{still}})}{\partial t} = \frac{\partial \mathbf{E}_{\text{mov}}}{\partial t}$$

$$\frac{\partial \mathbf{E}_{\text{still}}}{\partial t} = 0$$

4. Corrected Newton's Laws of Motion

- **First law:**

"Every mass (atom, molecule, particle, body, vacuum, transmission medium) persists in the status of the quasi-rest or quasi-uniform motion in a quasi-circle, or quasi-ellipse (eccentricity $e \rightarrow 0$) as far as it the external forces do not force it to change its status. (This notion is called the **generalized law of inertia**)."

- **Third law:**

All movements in physics are based **on principle of action - reaction** and **on velocity** of stable particles (e^- , p^+ , n^0 , D , $He-3$, α).

- **Action**, as a motion of stable particles (e^- , p^+ , n^0 , D , $He-3$, α), is characterized by **alternating acceleration and deceleration motion** in the source, along ellipse or quasi-ellipse (eccentricity $e \rightarrow 0$).

Stable particles of various speed (leptons μ^- , τ^- , baryons, mesons), bosons W^+ , W^- , Z (β electrons) are characterized by kinetic energy in direction of motion

$$T_{kin id} = mc^2 [\ln |1-v/c| + (v/c)/(1-v/c)]$$

- **Reaction** creates in the transmission medium, **electromagnetic waves**, as unstable "particles" -

neutrinos ν_e , ν_μ , ν_τ , mesons π^0 , π^+ , π^- , η , K and gamma rays ($f > 10^{19}$ Hz) are characterized by kinetic against direction of motion as wave

$$T_{kin ad} = mc^2 [\ln |1+v/c| - (v/c)/(1+v/c)]$$

Accompanying activity of reaction on movement of stable particles in the transmission medium are **waves**, or "unstable particles" i.e. **neutrinos and mesons**.

4. Corrected Newton's Laws of Motion

Consequences

Physics is Easy

Leptons (electron, muon, tau), W^+ - Z bosons and neutrinos (electron neutrino, muon neutrino, tau neutrino) can be replaced with electron moving at different speeds from **0.001c up to 0.999.. c** :

Electron, electron neutrino are in the electron at speed of electron : from $v = 0.001c$ to $v = 0.9 c$

Muon, muon neutrino are in the electron at speed of electron : $v = 0,995308032046c$

Tauon, tauon neutrino are in the electron at speed of electron : $v = 0,99971316674c$

W^+ - boson and neutrino are in the β electron at speed of electron : $v = 0,99999364465781184c$

Z boson and neutrino are in the β electron at speed of electron : $v = 0,999994396590953c$

Higgs Boson 125300 MeV/c² speed of proton : $v = 0,9928305c$ **β electron is radiated from a neutron**

Hyperons, mesons and quarks can be replaced by proton and neutron ,or alpha particle respectively, moving at different speeds from 0.1c up to 0.999.. c :

Lambda hyperón 2286,46 MeV and pion π^0 : 134.9766(6) MeV are in the proton at speed of proton $v = 0,8022863362c$

hyperon Σ^+ (2645) 2646,6 MeV and pion π^\pm : 139.57018(35) MeV are in the proton at speed of proton $v = 0,819183027c$

hyperon Σ^- 165 GeV and meson K^- 493.7 MeV are in the alpha particle at speed of alpha particle $v = 0,7533c$

4. Corrected Newton's Laws of Motion

•Consequences

• What is Quark?

Two energies, which are measured in opposite directions, and we consider them as quarks are actually two different kinetic energy of a single proton, the first in the direction of its movement, and the second in the opposite direction. Quarks are actually locked (**confinement**) in proton, as is clear from the individual tables.

-QUARK = proton of different speeds

A pair of quarks of one generation = one speed of proton:

u,d quarks are in the proton at speed of **proton** : from $v= 0,05875c$ to $v= 0,105065c$

c,s quarks are in the **proton at speed of proton** from $v=0,713c$ to $v=0,7805c$

t quark is in the proton (neutron) at speed of **proton (neutron)**:

$v=0,994637c$ for **top quark: 169 100MeV**

$v=0,994766c$ for **top quark: 173 400MeV/c²**

b quark is in the proton (neutron) at speed of **proton (neutron): $v=0,8665c$ for 4,2 GeV bottom quark**

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Consequences

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u,d quarks are in the proton at speed of proton :
from $v= 0.05875c$ to $v= 0.105065c$

v/c	$T_{kin id} = mc^2[\ln 1-v/c + (v/c)/(1-v/c)]$	$T_{kin ad} = mc^2[\ln 1+v/c - (v/c)/(1+v/c)]$
0.05875	Down quark $T_{kin id} = 1.7550$ MeV / p: [] = 0.0018704988039450329861777626124876	Up quark $T_{kin ad} = 1.5$ MeV / p: [] = 0.0015986835148543461794415692315107
0.075	Down quark $T_{kin id} = 2.92697671$ MeV / p: [] = 0.0031195396113692225967210545118109	Up quark $T_{kin ad} = 2.4$ MeV / p: [] = 0.002553219719161004341317048303269
0.081622	Down quark $T_{kin id} = 3.5$ MeV / p: [] = 0.0037302615346601410853636615401917	Up quark $T_{kin ad} = 2.81404106871$ MeV / p: [] = 0.002999174044442449432232831693702
0.08878	Down quark $T_{kin id} = 4.18366235$ MeV / p: [] = 0.0044589013511482922312132108807756	Up quark $T_{kin ad} = 3.3$ MeV / p: [] = 0.003517103732679561594771452309324
0.094686	Down quark $T_{kin id} = 4.8$ MeV / p: [] = 0.0051156918494022662432562213837619	Up quark $T_{kin ad} = 3.72637$ MeV / p: [] = 0.003971527848360625619647345216845
0.105065	Down quark $T_{kin id} = 6$ MeV / p: [] = 0.0063947340594173847177662769260429	Up quark $T_{kin ad} = 4.530260$ MeV / p: [] = 0.0048283015026596502291040657295924
	Quarks are actually locked (confinement) in proton	as is clear from the individual tables

from $v= 0.713 c$ to $v= 0.73333c$ s quark $m_0 = 70 - 130$ MeV/c², 95+5-5 MeV/c² [1]

$m_0 = 80-130$ MeV/c², Theorized [Murray Gell-Mann](#) (1964) [George Zweig](#) (1964) Discovered 1968, [SLAC](#)

[1] Citation: J. Beringer et al. (Particle Data Group), PR D86, 010001 (2012) (URL: <http://pdg.lbl.gov>)

c quark Theorized [Sheldon Glashow](#), [John Iliopoulos](#), [Luciano Maiani](#) (1970)

Discovered Burton Richter et al. (SLAC)(1974) Samuel Ting et al. (BNL)(1974)

c quark $m_0 = 1.16-1.34$ MeV/c², $m_0 = 1.29+0.05 -0.11$ GeV/c²[1] Decays into Strange quark (~95%), Down quark (~5%)[2][3]

v/c	$T_{kin id} = mc^2[\ln 1-v/c + (v/c)/(1-v/c)]$	$T_{kin ad} = mc^2[\ln 1+v/c - (v/c)/(1+v/c)]$
0.713	charm quark $T_{kin id} = 1.160$ GeV / p: [] = 1.236047494268773255524413529431	strange quark $T_{kin ad} = 114.485493763640$ MeV / p: [] = 0.12201738104659464824870350196726
0.72585	charm quark $T_{kin id} = 1.270$ GeV / p: [] = 1.3535582771630143437838209404184	strange quark $T_{kin ad} = 117.41941$ MeV / p: [] = 0.12514431408438967945446850497659
0.73333	charm quark $T_{kin id} = 1.340$ GeV / p: [] = 1.4281572732698825869678018468163	strange quark $T_{kin ad} = 119.1311$ MeV / p: [] = 0.12696860023316592749751861919307
	Quarks are actually locked (confinement) in proton	as is clear from the individual tables

t quark to b quark are in the proton at speed of proton :
 from $v=c$ to $v=0$. c t quark $m_0 = 172.44 \pm 0.13$ (stat) ± 0.47 (syst) GeV/c^2 ^[1] ,

$m_0 = 173.4$ MeV/c², Theorized [Makoto Kobayashi](#) and [Toshihide Maskawa](#) (1973) Discovered [CDF](#) and [DØ](#) collaborati
 Decays into: [bottom quark](#) (99.8%), [strange quark](#) (0.17%), [down quark](#) (0.007%)

v/c	$T_{kin id} = mc^2[\ln 1-v/c + (v/c)/(1-v/c)]$	$T_{kin ad} = mc^2[\ln 1+v/c - (v/c)/(1+v/c)]$
0.994766	top quark $T_{kin id} = 173.4$ GeV / p: [] = 184.8078143171624183434454	$T_{kin ad} = 179.9968678$ MeV / p: [] = 0.191838683558878228973
0.994637	top quark $T_{kin id} = 169.1$ GeV / p: [] = 180.2249215745799592957129	$T_{kin ad} = 179.96660877927$ MeV [] = 0.191806433786441122906
0.8665	bottom quark $T_{kin id} = 4.2$ GeV / p: [] = 4.476313841592169302436394	$T_{kin ad} = 149,9613333459543879$ MeV [] = 0.159827140990503087217669575
	t -> b -> c -> s -> u <-> d This decay of quarks actually means a reduction of the speed of proton	

v/c	$T_{kin id} = mc^2[\ln 1-v/c + (v/c)/(1-v/c)]$	$T_{kin ad} = mc^2[\ln 1+v/c - (v/c)/(1+v/c)]$
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Interesting DECAY MODES

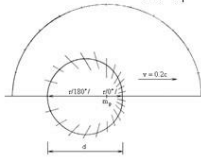
v/c	$T_{kinid} = mc^2[\ln 1-v/c + (v/c)/(1-v/c)]$	$T_{kinad} = mc^2[\ln 1+v/c - (v/c)/(1+v/c)]$	Decay modes
Proton 0,8212451756	Ω_0c 2,695.2±1.7 MeV/ p+ : [] = 2.87251447 Ω_0c	π^+ 139,57 MeV / p+ : [] = 0.1487523587588583	See Ω_0c decay modes
Proton 0.81052636568	Σ^+c 2452,9 MeV/ p+ : [] = 2.614273770499822082725714 Λ^+c	Pion π^0 136,93440 MeV/ p+ : [] = 0.1459431789448380519219438	$\Lambda^+c + \pi^0$
0,9928305	Higgs Boson 125300 MeV /p: 133,54335827671029218747501724036	179.54287216724 MeV 0.191354813279005033975005068774	

- Leptons (electron, muon, tau), **W + - Z bosons** and neutrinos (**electron neutrino , muon neutrino, tau neutrino**) can be **replaced with electron** moving at different speeds from 0.001c up to 0.999.. c :
- **Electron, electron neutrino** are in the electron at speed of electron : from $v= 0.001c$ to $v= 0.9 c$
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- **Higgs Boson 125300 MeV/c** speed of proton : $v= 0,9928305c$ β electron is radiated from a neutron
- Hyperons, mesons and quarks can be replaced by proton and neutron ,or alpha particle respectively, moving at different speeds from **0.1c up to 0.999.. c** :
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- hyperon $\text{Chí } c$ (2645)+ 2646,6MeV and pion π^\pm : 139.57018(35) MeV are in the proton at speed of proton $v= 0,819183027c$
- hyperon 6,165 GeV and meson K- 493.7 MeV are in the alpha particle at speed of alpha particle $v= 0,7533c$

Radius of force reach of particles Heisenberg's uncertainty principle

$$W = W_{\text{kin}} \left(1 - \frac{v_1}{c} \cos \vartheta\right)^2 = \frac{1}{4\pi\epsilon_0} \frac{e^2}{r} \left(1 - \frac{v_1}{c} \cos \vartheta\right)^2$$

$$W = T_{\text{kin}} = \int dW_p = \frac{m_0 c^2}{\cos^2 \vartheta} \left[\ln \left| 1 - \frac{v}{c} \cos \vartheta \right| + \frac{v \cos \vartheta}{1 - \frac{v}{c} \cos \vartheta} \right]$$



$$r_s = \frac{1}{4\pi\epsilon_0} \frac{e^2}{m_0 c^2} \frac{\left(1 - \frac{v}{c} \cos \vartheta\right)^2 \cos^2 \vartheta}{\left[\ln \left| 1 - \frac{v}{c} \cos \vartheta \right| + \frac{v \cos \vartheta}{1 - \frac{v}{c} \cos \vartheta} \right]}$$

$$r_p = \frac{1}{4\pi\epsilon_0} \frac{e^2}{m_p c^2} \frac{\left(1 - \frac{v}{c} \cos \vartheta\right)^2 \cos^2 \vartheta}{\left[\ln \left| 1 - \frac{v}{c} \cos \vartheta \right| + \frac{v \cos \vartheta}{1 - \frac{v}{c} \cos \vartheta} \right]}$$

"The bigger the impulse (i. e. the higher speed, too) the shorter force range radius."

"The smaller the impulse (the slower speed) the longer force range radius."

The higher the speed of particle, the shorter radius of its own force range (it is significant for $v > 0,05c$).

At the same time it is the explanation of the short radius of force range of the particles of strong fields.

Slow speed is accompanied by the long radius of force range.

v/c	$r(0^\circ)$ [fm]	$r(180^\circ)$ [fm]	d_p [fm]
10^{-6} (300m/s)			$3.06 \cdot 10^9$
10^{-3} (300km/s)			$6.12 \cdot 10^3$ (6pm)
0.03	3.0719	3.75224	6.824
0.04	1.66934	2.1798	3.8491
0.06	0.6917	1.0324	1.7241
0.07	0.49045	0.78267	1.27312
0.1			0.6361
0.11	0.1716	0.35832	0.5299
0.19	0.0421	0.1516	0.1937
0.5			0.04895
0.7			0.0373
1	High speed is	accompanied by the short	radius of force range.

The Universe is the Cathedral of Science.

Doubts are anteroom Cathedral of SCIENCE.

Confirming our theory in Universe.

1. Movement Principles of the Fast-Spinning Bodies

<http://vixra.org/pdf/1404.0238v1.pdf>

2. Nuclear Fusion

<http://vixra.org/pdf/1404.0130v1.pdf>

3. Neutrino Oscillations

<http://vixra.org/pdf/1404.0369v1.pdf>

4. Orbit Radius and Speed of the Sun Around the Center of Gravity of the Solar System

<http://vixra.org/pdf/1404.0253v1.pdf>

Interesting: [Einstein's Theory of Relativity Can not Explain ...](http://vixra.org/pdf/1502.0184v1.pdf)

<http://vixra.org/pdf/1502.0184v1.pdf>

Movement principles of the fast-spinning pulsars, Nuclear Fusion, Wave - Particle Duality as Kinetic Energy against and In Direction of Motion

the fully Maxwell's equation, Lorentz equals without the help of Space-Time, Confinement of quarks, Great Table of Elementary Particles

Spectral line H α , Neutrino Oscillations, Non-linear Form of the interference field

Asymmetrical Form of Intensity of the Moving Charge Electric Field

Kinetic energy of a charge moving at the velocity of v has two different values:

against direction of motion as wave: $T_{\text{kin ad}} = mc^2 \left[\ln \left| 1 + \frac{v}{c} \right| - \frac{v/c}{1+v/c} \right]$,

in direction of motion as particle: $T_{\text{kin id}} = mc^2 \left[\ln \left| 1 - \frac{v}{c} \right| + \frac{v/c}{1-v/c} \right]$

Yukawa potential

5. Spectral line H α

<http://vixra.org/pdf/1404.0248v1.pdf>

6. Great Table of Elementary Particles

<http://vixra.org/pdf/1404.0243v1.pdf>

7. Corrected Newton's Laws of Motion

<http://vixra.org/pdf/1501.0199v1.pdf>

$[\ln |1-v/c| + (v/c) / (1-v/c)]$, $[\ln |1+v/c| - (v/c) / (1+v/c)]$ [] it is crucial for the correct quantitative values in most relationships.

QUALITATIVE TRUTH verified by all physicists:

1. Electron emits electromagnetic waves if and only if it is moving (alternately accelerated and (decelerated) [after almost zero eccentricity ellipse].
2. Moving charge creates not only electric but also magnetic field. We have a magnetic field if and only if we have moving charges

QUANTITATIVE STATEMENTS then creates different theories from different authors. For example, Maxwell's electromagnetic theory, Bohr's atom model, Lorentz force ...

These quantitative statements can be improved over the centuries and become closer to the truth.

For example, using the asymmetric shape of the electric field of the moving charge, we can deduce:

- a) 4. Maxwell's equation that Maxwell did not deduce. (p.30 [1])
- b) Calculating of the Lorentz relation for force from the relation for the electric field of a moving charge (p.28 [1])
- c) Gaussian Law (p.29 [1])
- d) Faraday's Law (p.29 [1])
- e) Kinetic energy in the direction of motion as Newton's - Einstein's kinetic energy of a particle moving in the transmissive medium and kinetic energy of waves (against direction of motion of a particle) that this particle is creating - leaving in transmissive medium - like Maxwell's energy.

What is also an elegant explanation of the 400-year-old dispute in physics: WAVE - PARTICLE DUALITY.

<https://biocoreopen.org/ijnme/New-Trends-in-Physics-Extraordinary-proofs.pdf>

- Given this large number of new facts, it would be very desirable to create as many discussions as possible on the above topics, to approve or correct them as we correct some past claims - e.g.:

Bohr's electron skipping

from one energy level to another

is replaced by a fluent, very fast electron motion after an almost zero eccentricity ellipse,

- Einstein's relation for kinetic energy $mc^2 - m_0c^2$

to replace with a relationship

$mc^2 [\ln |1-v/c| + (v/c) / (1-v/c)]$ for particle

$mc^2 [\ln |1+v/c| - (v/c) / (1+v/c)]$ for wave

The faculty professors are fully engaged in their teaching duties.

There is no time left for doubts in anteroom Cathedral of SCIENCE.

Table 2. Calculation of the kinetic energy T_{kin} of a body moving at the velocity of v according to Vlcek and according to Einstein

v/c	Vlcek 's theory - kinetic energy against direction of motion as wave $T_{kin ad} =$ $mc^2 [\ln 1+v/c - (v/c) / (1+v/c)]$	Vlcek 's theory – kinetic energy in direction of motion as particle $T_{kin id} =$ $mc^2 [\ln 1-v/c + (v/c) / (1-v/c)]$	Einstein's theory $T_{kin} = mc^2 - m_0 c^2$
0.1	0.00439 mc^2	0.0057 mc^2	0.0050 $m_0 c^2$
0.2	0.0156 mc^2	0.0268 mc^2	0.0200 $m_0 c^2$
0.3	0.0316 mc^2	0.0719 mc^2	0.0480 $m_0 c^2$
0.4	0.0508 mc^2	0.1558 mc^2	0.0910 $m_0 c^2$
0.5	0.0722 mc^2	0.3068 mc^2	0.1550 $m_0 c^2$
0.6	0.0950 mc^2	0.5837 mc^2	0.2500 $m_0 c^2$
0.7	0.1174 mc^2	1.1293 mc^2	0.4010 $m_0 c^2$
0.8	0.1434 mc^2	2.3905 mc^2	0.6670 $m_0 c^2$
0.9	0.1680 mc^2	6.6974 mc^2	1.2930 $m_0 c^2$
0.99	0.1906 mc^2	94.3948 mc^2	6.9200 $m_0 c^2$
1.0	0.1931 mc^2	infinite	infinite