

THE PHYSICAL MODEL OF THE FLUCTUATING VACUUM AND THE
DEPENDENCE
OF THE TIME FROM ITS COORDINATES WITHIN THE SPACE.}

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A physical model (PhsMdl) of the existent fluctuating vacuum (FlcVcm) and its elementary collective excitation photon as a solitary package of cylindrical boson harmonic oscillations and nearly flat fermion harmonic oscillations and spherical fermion oscillations of the neutral fluctuating vacuum are offered. The physical cause for the gravitation interaction and its space dependence is faint. The existence of the fluctuating vacuum as an unmoved ideal dielectric is substantiated by statement about equality of the light velocity in different inertial coordinate systems. We find that the necessity for looking the wave in same shape within all inertial coordinate systems is a cause for the existing dependence between the time and space of oscillating motion, which is described by Lorentz transformation.

We assume that the FlcVcm is consistent by neutral dynamides, streamlined in some close-packed crystalline lattice. Every dynamide is a massless neutral pair, consistent by two massless opposite point-like (PntLk) elementary electric charges (ElmElcChrgs): electrino (-) and positrino (+). In a frozen equilibrium position both opposite PntLk ElmElcChrgs within every dynamide are very closely installed one to another and therefore the aggregate polarization of every one dynamide has zero value and its electric field (ElcFld) also has zero electric intensity (ElcInt). However the absence of a mass in a rest of the electrino and positrino makes them possible to have a big mobility and infinitesimal dynamical inertness of its own QntElcMgnFld, what permits them to be found a bigger time in an inequilibrium distorted position. The aggregate ElcFld of the dynamide reminds us that it could be considered as the QntElcFld of an electric quasi-dipole moment (ElcQusDplMmn) because both opportunity massless electrino and positrino have the same inertness. For a certain that is why the FlcVcm does not radiate real photon (RlPhtn) by itself, as dynamide electric dipole moment (ElcDplMmn) has a zero value as a result of an equality of both ratios $\frac{+e}{\Theta}$ and $\frac{-e}{\Theta}$, where Θ is a dynamical mass of a PntLk ElmElcChrg ignoring the mass of own interaction. The aggregate ElcFld of every dynamide polarizes nearest neighbor dynamides in an account of which nearest dynamides interact between itself, and in a result of which its elementary collective excitations have a wave character and behavior. It is richly clear that the motions in the opposite direction of both opposite PntLk ElmElcChrgs of an every dynamide creates an aggregate magnetic field (MgnFld) of every one and the sum of which one makes a total magnetic part of the free QntElcMgnFld

It is common known that the physical model (PhsMdl) presents at us as an actual ingredient of every good physical theory (PhsThrn). It would be used as for an obvious visual teaching the unknown occurred physical processes of the investigated phenomena within micro world. Although up to the present nobody of scientists of the theoretical physics distinctly knows are there some elementary micro particles (ElmMcrPrts) as a fundamental building stone of the micro world and what the elementary micro particle (ElmMcrPrt) means, there exists an essential possibility for a physical clear and scientific obvious consideration of the uncommon quantum behavior and unusual

dynamical relativistic parameters of all relativistic quantized MicrPrts (QntMicrPrts) by means of our convincing and transparent surveyed PhsMdl. It is well known that very often the ElmMicrPrts behavior would be studied by means of an investigation of their behaviors after some their interaction by already well known ElmMicrPrts. It turns the emitted real photons are quanta of the quantized electromagnetic energy, which have a solitary needle form. By means of the upper scientific investigation we understand that the creation of the QntMgnFld by moving of the opposite PntLk ElmElcChrgs of electrinos and positrinos in the opposite directions within all dynamides together with their aggregate QntElcFld as two components of one free QntElcMgnFld one secures their motion.

Therefore we suppose that the real photon (RIPhtn) is some elementary collective excitation of the FlcVcm in the form of a solitary package of a needle cylindrical form of collective harmonic oscillations of the vacuum ideal dielectric. The opposite deviations of both PntLk massless opportunity ElmElcChrgs of an every dynamide from their equilibrium positions in the vacuum close-packed crystalline lattice creating its solitary package of a needle cylindrical form causes own polarization of the vacuum ideal dielectric, the sum of which creates an aggregate polarization of the FlcVcm as an ideal dielectric, which causes the existence of a total resultant QntElcFld. Consequently the aggregate polarization of all dynamides creates own resultant QntElcFld, which is an electric part of the free QntElcMgnFld.

The reception of known from the QntElcDnm an expressions for the ElcInt and MgnInt values of the QntElcMgnFld by dint of a simple transformation of an expression, describing deviation of two PntLk ElmElcChrgs of distorted dynamides into the ideal dielectric of the FlcVcm proves obviously and scientifically the true of our assumption about the dipole structure of the vacuum and about the creation way of its collective oscillation - RIPhtn. The existence of a possibility for a creation of virtual photons (VrtPhtns) as an unstable excitation within the fluctuating vacuum (FlcVcm) renders an essential influence over the motion of a electric charged or magnetized micro particles (MicrPrts) by means of its EntElcMgnFld. The existence of a free energy in the form of a stable micro particle (MicrPrt) can break of the connection between pair contrary massless PntLk ElmElcChrgs (electrino and positrino) \ of one dynamide and to excite pair of two opposite charged MicrPrts at once.

The consideration of the fluctuating vacuum as some ideal dielectric of the close-packed crystalline lattice of molecular massless dynamides within neutral vacuum explains us the cause as a result of which the light (RIPhtns) propagates through vacuum by same velocity without some dependence of the velocity of its source. It is naturally that when some RIPhtn is moving within the space of some material substance, then supplementary polarization of atoms and molecules of same material substance appears, which delays its moving and slows down the RIPhtn velocity. This slow down of the RIPhtn velocity is known as some caring away of the light from the moving material substance.

As all massless MicrPrts are collective excitements of the neutral molecular vacuum of easy polarized close-packing lattice and all massive McrPtrs are Excitations of one ore two PntLk ElmElcChrgs within same vacuum, then every one of them could move freely through vacuum close-packaged lattice of its ideal dielectric without any friction or damping, that is to say without one to feel the existence of the vacuum. Moreover, the existence of some massive MicrPrt with high density own ElcMgnFld within the neutral vacuum distorts its easy polarized ideal crystalline

lattice. QntElcMgnFld, created by own FnSpr ElmElcChrg. It turns that the high density ElcMgnFlds of on FnSpr ElmElcChrg ensures the existence of this natural distortion of the neutral FlcVcm with molecular close-packed lattice excites and ensures the gravitation field of the ElmMicrPrt's mass, which by using same force show attention upon the mass of another ElmMicrPrt and upon its behavior. We understand that the equal space dependence of electric, magnetic and gravitation interactions between charged, magnetized and massive particles from space distance between them is a result of the equal space dimensional. In such a naturally obvious and physically clear way we understand why the force of the gravitation interaction is determined by the self energy at a rest and mass.

In such a way we understand that Lorentz transformations are determined by the clear physical request for an equality (invariant) of the wave form within all inertial coordinate systems. Indeed, it is naturally that the time must have equal value in all points of the motionless coordinate system. As a wave equation is invariant in relation to Lorentz transformation, then in all motion inertial coordinate system describes the propagation of the time within motion inertial coordinate system. Only at such dependence of the time from the coordinates of its place all wave shapes would be alike.

As long as at a last century Fitzerald shown that the wave equation don't change own shape at Lorentz transformation of the time and space at a transition from one inertial coordinate system to an other one. Therefore if the time has one value in different points within unmoved inertial coordinate system, then the time has different values in different points of moving inertial systems and therefore we need to think that the time moves within different inertial coordinate systems. The velocities of the time within different inertial systems is determined by the phase relatively velocity of the light wave in the moved coordinate system. In such a clear way the reduction of the time interval and the space length are natural results of the determination of the space points of the watch or the ends in an equal time in two different inertial coordinate systems. Always the smaller reduction time interval and space length are in moved inertial coordinate systems, when the time is moved with a limited velocity.