

## CREATING SUBATOMIC STRUCTURES BY NMN MODEL

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### ABSTRACT

*This article shows a developed Natural Model of Nature (NMN model) which creates subatomic structures and determines their fundamental characteristics. This begins with elementary electronic triplets, (as the most complex sub-elemental structure), and in virtue of them, builds all subatomic particles. In that respect, these interactions always have all three fundamental sub-elemental particles present. It is reasonable to assume that the act of creating subatomic particles causes the appearance of notable variances in relation to existing configurations. There is a favorable circumstance in that the data can be scrutinized by various means. Some of the configurations shall be identified later to explain characteristics and processes at atomic and molecular levels. On this level, there is still no differentiation between particles which could explain differences between inert and living matter. Both subatomic structures and atoms themselves have standalone characteristics. In addition, experiments with processes that create and decompose subatomic particles will reveal their various structures. The conclusions which follow have serious implications connected to the characteristics and operations of the various particles. For appreciation of this article, one requires an acquaintance with the contents of [L1], and if possible, with [L2].*

### 1. INTRODUCTION

The Meta NMN model (defined in article [L.1],) that encircle the complete structure of Nature, is based on the interaction of three fundamental substances: material, electrical and mental. Their carriers correspond to fundamental sub-atomic particles, functioning at the so-called sub-elemental level forming sub-elemental structures. The most complex of them are electron elementary triplets operating at this level, which is practically unexplored. Its magnitudes and other properties are defined intuitively based on experiments at the atomic and molecular level. However, existing hypotheses and theories do not take into consideration the NMN model, which is required to create a more coherent model of Nature.

It can be specified as starting fundamental variance:

- The fundamental sub-elementary level NMN model contains materions, electrions and menions.
- Material and electrical substances are separate, which within the existing standard model, is not the case.
- Creating structures with materions and electrions is possible only with proximity to participation menions.

- All particles on the subatomic and atomic level have complex structure.
- All formed structures are the result of interaction processes whose dynamics are a consequence of a functioning law of functioning masses. This doesn't particularly mean existing forces. It means that a categorization of particles (bosons) is superfluous in the NMN model. Every particle is a carrier of forces which give it original characteristics.

This orientation contains some essential characteristics opposite to those currently used within the Standard model and Quantum theory. They are:

- Hypothesis about the indivisibility of sub-elemental particles rules out the possibility of a particular carrier of interactive processes, which the Standard model contains (bosons). Their existence would, suggest a means of separating sub-atomic particles which would then not be sub-elemental. Functions which operate at a distance, without some particular moderator, would serve to rule out this possibility.
- Within the Standard model itself, it nowhere explicitly states that combined material and electrical characteristics are indivisibly connected within particles. This is unlike the fundamental assumptions within the NMP model where features are connected to become sub-elemental particles. The Standard model can be an argument for introducing paradoxes and dualisms. This indivisibility is illogical because it requires carriers for various process and appearances.
- Indivisibility of subelemental particles also rules out the possibility of transformations of the type, mass  $\leftrightarrow$  energy. It is possible only to change their energy state by other unalterable characteristics.
- Transformation of one elementary particle to another is not possible as well. They can only through corresponding interactive processes, form aggregates of various structures which retain their own fundamental characteristics integrated within the general properties of the aggregates.
- Separate material and electrical particles enables separate observation of specific appearances and processes, of these particles, which give alternate pictures, such as for instance, electromagnetic waves.
- Introduction of mental substance into the group of sub-elemental magnitudes makes it possible to include nonphysical appearance and processes in the analysis of Nature, especially to those connected with living phenomena<sup>1</sup>.

## **2.STARTING DATABASE.**

The starting database represents the results of experimental investigations and optionally selects a few for analysis<sup>2</sup>. From the available data, the few are those that belong to the stable

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<sup>1</sup> Weight in these magnitudes will be explained in a coming feature article. H it is given an already-defined role in creating both sub-elemental and sub-atomic structures.

sub-atomic particles which make up an atom's structure. These data are supplemented with essential postures contained within NMN model, and which relate to the processes creating subatomic and atomic structures. These data are:

1. Proton and neutron are made up of three particles named quarks,
2. Electrical charge of quarks can be  $1/3$  or  $2/3$  electron's charge for both polarities.
3. Electron and proton has the same electric charge but opposite polarity.
4. Electrons, protons and neutrons have mass.
5. Protons and neutrons are sub-atomic particles with large masses, with the neutron being a little larger.
6. Electron is the sub-atomic particle with the least mass.
7. Subatomic particles have spin.
8. There are anti-electrons and antiprotons.
9. By respective processes, decomposition of some particles result in the formation of neutral particles with small masses, named neutrinos. They have no physical model, but we shall count them as fact and, if possible, model their appearance.
10. The interesting data are connected to structures of sub-atomic particles, and the particles that participate in their creation. These data are shown in Table No.1, with quarks which are surrounded only with quark down and quark up and their antiparticles, because their presence is only tentatively confirmed within subatomic structures.
11. An occasional decomposition of proton and negatron create the particles with an electric charge of  $1/3$  or  $2/3$  the electron's charge, but with both polarities.
12. On the occasion of the decomposition of a neutron, there arise a proton and one electron, and by the decomposition of a neton there arise a negatron and positron.
13. All particles in this table have their own antiparticles.

Because of this hypothesis, which is a component NMP model, we add:

14. Electron and positron have a complex material structure,
15. Their structure is simpler than the proton and neutron.
16. The number of constructive elements should be minimal, but must enable creating all experimentally confirmed particles.

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<sup>2</sup> Analysis by virtue of a theory other than the NMN model does not take into consideration the process of creating subatomic and atomic structures. I will use some of them, but only in order to explain discrepancies within them.

17. Among subatomic particles, both the proton and neutron have the greatest mass.

These results show that there exist, three sub-atomic fundamental particles: electron, proton and neutron. By themselves in the Standard model, the proton and neutron are complex particles and the electron not, while according to the NMP model, the electron is a complex particle as well. To fix the species and number of triplet elements, this distinction is fundamental. It also enables us to reinstall a united system in the creation of subatomic particles. Their composition and characteristics depend on values and polarity of electric charge, on mass and spin values of triplet elements.

Tables No.1.

Name	mark	Mass GeV/c <sup>2</sup>	Electric charge (e)	Spin
Electron	e	0,000511	-1	1/2
Electron's neutrino	$\nu_e$	$<10^{-8}$	0	1/2
Proton	p	0,9383	1	1/2
Neutron	n	0,9396	0	1/2
Quark down	d	0,005-0,0085	-1/3	1/2
Quark up	u	0,0015-0,0045	2/3	1/2

Note: Every particle within this table has its own antiparticle and additionally, each quark has three colors.

Analysis of these data provides conditions for one coherent system creating subatomic and atomic structure using the electron's elementary triplets as the basic constructive elements. These conditions are:

1. Electron, proton and neutron, as well as their antiparticles must have a common model created by triplet elements.
2. The electron represents the sub-atomic structure made of the electron's elementary triplet.
3. Characteristics of the electron's elementary triplet are follow:
  - Electric charge has  $\pm 2/3$  and  $\pm 1/3$  of the values of electron and proton's charges.
  - Mass of electron's elementary triplet is  $1/3$  of electron's mass.
  - Triplet element's spin can be left or right.
  - Value of electromagnetic spin of electron's elementary triplet has a constant value which is  $1/2 \hbar$ .
4. Characteristics of the proton elementary triplet are:
  - Electric charge is the same as the electron's elementary triplets.

- Relation of the mass of the proton's elementary triplet to the mass of the electronic elementary triplet is the same as the relation of the proton's and electron's masses.
  - Proton's elementary triplet's spin can be right hand or left hand and represents the resultant value of the electron's elementary triplet's spin.
5. Electron and proton's antiparticles form themselves by the same triplet elements. They are named positron and negaton, respectively.
  6. Neutron is itself formed by the same triplet elements as the proton but with one adjunct electron. It also can have its own anti-particle, but is recognized only by the direction its spin, which are a mass' characteristic, and which within the structure participate as a positron in lieu of the electron.
  7. Atom's nucleus is not a subatomic particle because these particles make it up. The structure of these is more complex and varies with every chemical element.

In virtue of these data and their designated conditions, there may evolve a method for creating subatomic magnitudes using the NMN model. Two fundamental conclusions may be derived from the foregoing data, and which are incongruous within both the Standard and NMN model. They are:

- Data about the existence of values of positive electric charge equal to one third the proton's charge is in reference to the conclusion that in order to have a negative charge one has to account for the spin. It is logical to conclude that the electron has a complex structure that makes three electronic elementary triplets. This is evident because it is certainly the case with the positron. In support of the data is that the positron, as the electron's antiparticle, must be composed of particles with third's values of electric charges.
- On complexity, all sub-atomic particles in the database showed particles whose mass is less than the mass of the electron, such as for instance, the electron neutrino. Forasmuch as it is an experimental confirmed fact, there must exist a mechanism for their arise being given a place within the subatomic structure with the other particles. This data, at the same time, represent in their own way, a denial of compact electron and quark structures, within the Standard model. It has a broader purpose.

### **3.CREATING SUBATOMIC STRUCTURES.**

By creating subatomic structures, the electronic elementary triplets represent fundamental construct elements, which are composed of fundamental sub-elemental structures: masions, empty electrions (both polarity) and necessary number supplement menions<sup>3</sup>. On account of that, we must begin at their creation.

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<sup>3</sup> Purport those terms contributed are within [L.1.]. Fundamental characteristic of these particles is that their mass is orders of magnitudes less than the mass of any sub-atomic particles.

### 3.1.CREATING ELECTRONIC ELEMENTARY TRIPLETS.

In specifying the characteristics of electronic elementary triplets, they must have sufficiently solid structures composed of a definite number of material and electrical sub-elemental particles. Their creation represents the last interactive process on the sub-elemental level. Their structure is defined before all, as a consequence of functioning menions and GMF, which means they have stable characteristics. The initial condition to form sub-elemental structures after the big bang is the presence of free empty electrions of both polarity, polynomial and monomial masions and supplemental menions with GMF. Within the composition of electronic elementary triplets, there proportionally enter all three kinds, which defines their fundamental properties which are already proven by experimental investigations.

Supplemental menions and GMF within processes creating electronic elementary triplets include the following:

- Creating of electronic elementary triplet's nucleus by masions. Their masses correspond to one third the electron's mass.
- The empty electrions, negative of or positive polarity, form on nucleus' surface a constant layer. Their number also should enable keeping the electric charge equal to a single or double third of an electron's charge of both polarity.
- Bringing to rotation the triplet's elements and make their spin by functioning on empty electrions and masions. The direction of rotation can be right or left.
- Quantity of supplemental menions is exhausted by species of electronic elementary triplets and there is enough of them to provide the necessary stability on an energetic level for creating electronic elementary triplet. This stability includes a constant angular speed of rotation of the structures as well.

The material structure of electronic elementary triplets make up materioni, in relation to monomial masions. With respect to their small masses, it is necessary to have a great number of them in order to provide a mass equal one-third the electron's mass. Influenced by menions and GMF forms they become composite monomial masions of great density, where they represent stable nucleons of electronic elementary triplets. The formed structure is presumably spherical thanks to the law of minimal potential energy. Materions' concentration is very high which permits tetrahedral structure masions, functioning supplemental menions and GMF, that prevent total compaction of the structures. The reason is that forces of interaction between components forming the nucleus have less value than can be expected by the concentration of masions. Nevertheless, the mass density of the nucleus represents some kind of black hole. Foreign influence, which would disrupt the cohesion of the nucleus, not including menions, can only be mechanical in nature because the masions within the nucleus do not expose electrostatic or electrodynamic-functioning particles with electric charge. Accordingly, the destruction of the nucleus of electronic elementary triplets is possible solely by inelastic collisions with material particles with small dimensions and great energy, regardless of their compensating or non-compensating electric charges. EMT cannot destroy nuclei for the same reason.

Around the nuclear form is a layer of empty electrinos, on whose polarity depends the kind electronic elementary triplet. The number of engaged empty electrinos should provide an elec-

tric charge of electronic elementary triplets equal either to one third or two thirds of an electron's charge, which may be positive or negative. There is a distinction in the value of the gravitational and electronic forces of interaction in that the latter dominate. No matter which role is played by menions in GMF in this case, they must compensate for the function of electrions of the same polarity, and provide stability for electronic elementary triplets. This is because they can be exposed to a number of electrical particles at a higher energy level and EMT with broader frequency spectra. Electromagnetic spins contribute to atomic stability which initially contribute to menions and GMF. By their action on empty electrinos and masions within the nucleus, comes the rotation of electronic elementary triplets and intensive electromagnetic processes followed by electromagnetic inertia. Inertia causes resistance to each change of state of the electronic elementary triplets, regardless of the nature and size of the cause of the change.

An additional requirement is to simultaneously create all electronic elementary triplets in virtue of the law of conservation of electric charge. It can have the appearance of spatially charges with one polarity and a violation of the quasi-neutral state of free space in the opposite case. The structure of electronic elementary triplets is such that neutrality is maintained at the atomic level wherein these elements operate. Only disturbances with enough energy can disorganize this neutrality in fundamental atomic structure.

The following magnitudes are important to determine the momentum of particles:

- Rotation and size of masses.
- Distance between the centre of gravity of the rotational structure and the axis of rotation.
- Speed of rotation.

Toward these descriptions, the three fundamental magnitudes on pre-elemental level are constant during long quasi-stationary periods in the same limited space. An angular momentum belongs to the physical quantities and must incorporate the follow spins:

- Electromagnetic spin due the rotation of electrions on the nuclear surface of an electronic elementary triplet.
- Mass spin due the rotation of masions within the nucleus of an electronic elementary triplet.

Mass' spin gives the following because its direction and speed predominantly defines electromagnetic spin:

- Interaction forces of menions and empty electrinos are greater than that of menions and masions.
- Masions are concentrated near the nuclear axis and empty electrinos within the surrounding volume, which by definition gives a greater value.

Energy level interaction within the nucleus is lower than the totally energy level of the complete electronic elementary triplet, because only masses engage the masions through local

gravitation fields. Moreover, masioni are situated within the complete nuclear volume and its average radius is less than the radius of the nucleus, which results in a depletion in the spin of the mass. Mass spin does not cause cohesion effects within the nucleus. Rotation directions do not contribute. Only size and correlation position of mass spin are fundamental. However, because of the gyroscope effect that every body rotating body demonstrates, this spin function stabilizes the position of triplet elements which are exposed to some influence within the atoms or from without.

Electromagnetic spin is a consequence of movement of the electric charge arranged on the nuclear surface. The direction of spin of electric charges of different polarity, depend on the direction of the vector formed by the magnetic field. It has a notable influence on the electric charge, and uniquely fixes the spin. With respect to the direction of rotation, the spin can be right or left-handed. Electromagnetic spin is by common consent (within elementary physics) defined by observation of the rotation of the electrical charge and the orientation vector of magnetic flux percolating to the surface outlines where the electric charge is observed (the surface is normal to the axis of rotation of triplet elements).

By so defining spins this identifies their subsequent properties:

- A discernment of the direction of electrical spin is indispensable for determining the possible polarities of movable electric charges.
- By electrical spin discernment, their direction identifies the polarity of movable electric charges.

The weight is determined by creating appropriate triplets which can then form various combinations. This spans the range from electronic elementary triplet to appropriate combinations of triplets. The combinations may be:

- Stable when, as already indicated, they are complete.
- Unstable after their partial destruction, through interaction with EMW and fast-moving free particles.

Ensuing structures are characterized by their masses, size and polarity of electric charges and the value of electromagnetic spins. All electronic elementary triplet masses and spins are the same..

Single-handed spins of electronic elementary triplets or subatomic structures, with relation to resultant electromagnetic spins of these aggregates, most often are not collinear and determine the fundamental direction of the aggregate's spin. This non-collinearity depends also on the impact of the energy states of particles in proximity. Because these are quantized, they will determine the spins of their constituent elements.

### **3.2.TYPE OF TRIPLET'S ELEMENTS.**

We now consider the method of creating elementary triplets. Electronic elementary triplets represent fundamental structures. There are four types which enable the creation of all subatomic particles. They are identified with the letter, E and will consist of electronic elementary triplets marked E1, E2, E3 and E4. In order to include all properties, a tag is added

to signify the direction of spin (*r* for right and *l* for left), and a following tag to identify the electric charge ( $2/3 e$ ,  $1/3 e$ ,  $-2/3 e$  and  $-1/3 e$ ). Therefore, we have:

- E1 electronic elementary triplet with left spin and charge  $-2/3$  of electron's charge,
- E2 electronic elementary triplet with left spin and charge  $1/3$  of electron's charge,
- E3 electronic elementary triplet with right spin and charge  $2/3$  of electron's charge,
- E4 electronic elementary triplet with right spin and charge  $-1/3$  of electron's charge.

Table No.2 gives a survey of electronic elementary triplets with their tags and general characteristics. They are differentiated by polarity, value of electric charge and spin direction, while their masses are the same and stack up to  $1/3$  the electron's mass.

Table No.2.

Type of spin	Electronic elementary triplets			
	Structure	Spin	Electric charge	Mass of triplet
E1	${}^lE^{-2e/3}$	1/2	$-2/3 e$	$1/3 Me$
E2	${}^lE^{e/3}$	- 1/2	$1/3 e$	$1/3 Me$
E3	${}^dE^{2e/3}$	1/2	$2/3 e$	$1/3 Me$
E4	${}^dE^{-e/3}$	- 1/2	$-1/3 e$	$1/3 Me$

Actively is give a look energy level thus far say over particle's aggregates. Energy levels of sub-elemental structures are varied. At the highest level of interaction there are sub-elemental aggregates that interact with one another. The subsequent stable structure represents the electronic elementary triplet, which is formed by lower sub-elemental aggregates, who's interaction's energy level is lower than the highest structures. Energy levels of the interaction of triplet elements within atoms is yet lower, and decomposition on the material level by available energies is possible for them.

The next group make up the proton's triplet elements. Their structures are made from electronic elementary triplets, and the number of them determine the difference between the proton's mass  $M_p$  and the electron's mass,  $M_e$ , and is:

$$(1) \quad k = \frac{M_p}{M_e} - \frac{1}{3}$$

We use corresponding tags replacing E with P. There is a distinction between them, in consequence of the fact that corresponding electric charges should stay the same, but their polarity, and the mass of protons are greater by the ratio  $k$ .

Therefore, proton triplet elements will be formed as follows:

- P1 will be formed by  $k(E1 + E3) + E3$ ,
- P2 will be formed by  $k(E2 + E4) + E2$ ,

- P3 will be formed by  $k(E3 + E1) + E1$ ,
- P4 will be formed by  $k(E4 + E2) + E4$ .

Reference is made to structures that contain  $k$  neutral components composed of positive electrical charge, electronic elementary triplets and polarity, according Table No.3, wherein are displayed the characteristics and tags of the proton triplet elements.

In this case there also is a valid conclusion that energy level of aggregates are at a relatively low range because the electric charge on them is nullified. On that account, aggregates can be decomposed by some external influences resulting in disengaging one of its parts, which appears as a neutral particle. These liberated neutral particles have greater masses than neutral particles that arise from electronic elementary triplets.

Proton triplet elements are also used in neutron creation. Nevertheless, as we will see, there are additional requirements, which violate symmetry in creating a neutron, as against creating electrons and protons.

In the two foregoing tables are direction-associated electromagnetic spins. Their values are  $1/2$  for both the electron's and proton's elementary triplets. This tag is customary and represent the ratio between real terms and Planck's  $\hbar$ . We may say the relative values electromagnetic spin or simply relative spin, which both mean the resultant value spin of these structures.

When we look at the composition of the foregoing triplet elements there may be noticed of a balance between positive and negative electric charges by electrons and positrons and subsequently by all other composed aggregates, starting with the proton triplet's elements. This ascertainment is fundamental because it states a general assumption about masses conservation. It challenges the posture about violation of baryon symmetry between matter and anti-matter. This question virtually does not exist in the NMP model because there are only pozions and negions, and they are balanced, as follows from previous explanations.

## 4. COMPOSITION OF SUBATOMIC STRUCTURES

### 4.1.COMPOSITION OF ELECTRONS AND POSITRONS

Foregoing constituent triplet elements and corresponding coordination of supplement menions participate by creating sub-atomic structures which.

- Attract and repulse electrostatic forces between triplet elements.
- Attract gravitational forces due to mass materions and mass within triplet's elements.
- Create electromagnets forces due to spin triplet elements.
- Create forces due to acting on the supplemental menions.

By analyzing the electron, it should have an electric charge  $e$  and spin  $1/2$ . This is made by a combination of an electron's elementary triplets:

$$(2) \quad 2 \cdot E1 + E2: \quad 2 {}^1E^{-2e/3} + {}^1E^{e/3}$$

Its electric charge is

$$(3) \quad -2 \cdot \frac{2}{3} \cdot e + \frac{1}{3} \cdot e = -1 \cdot e$$

Electron spin has the value

$$(4) \quad 2 \cdot \frac{1}{2} - \frac{1}{2} = \frac{1}{2}$$

Compositions of both electron and positron are showed in Fig 1.A.

Positron's structure is formed in a similar manner to the electron's elementary triplets:

$$(5) \quad 2 \cdot E3 + E4: \quad 2 \text{ } ^dE^{2e/3} + \text{ } ^dE^{-e/3}$$

In this composition, the positron's electric charge is:

$$(6) \quad 2 \cdot \frac{2}{3} \cdot e - \frac{1}{3} \cdot e = 1 \cdot e$$

The positron's spin is right and has the value

$$(7) \quad 2 \cdot \frac{1}{2} - \frac{1}{2} = \frac{1}{2}$$

Electron and positron masses are the same. The energy level of interaction between electrons and positrons is very high because constituent triplet's elements are spaced at a short distance. Their decomposition requires a high energy, which for the time being cannot be provided by known physical action.

#### 4.2.COMPOSITION OF PROTONS AND NEGATRONS

The composition of the proton and negatron triplet elements will be more complex than the electron and positron. The value of the electric charge is the same but the relation of their masses is equal to  $k$ . The following proton triplet's elements form the proton's structure:

$$(8) \quad 2 \cdot P1 + P2: \quad 2 \text{ } ^dP^{2e/3} + \text{ } ^dP^{-e/3}$$

In virtue of this composition the electric charge of the proton is:

$$(9) \quad 2 \cdot \frac{2}{3} \cdot e - \frac{1}{3} \cdot e = 1 \cdot e$$

Proton's spin is right and its value is

$$(10) \quad 2 \cdot \frac{1}{2} - \frac{1}{2} = \frac{1}{2}$$

The mass is k times greater than the electron's mass. In Fig 7.1-B is shown the composition of the proton and negatron.

The antiproton, called negatron, the structure has the proton triplet's elements:

$$(11) \quad 2 \cdot P3 + P4: \quad 2 \cdot {}^1P^{-2e3} + {}^1P^{e/3}$$

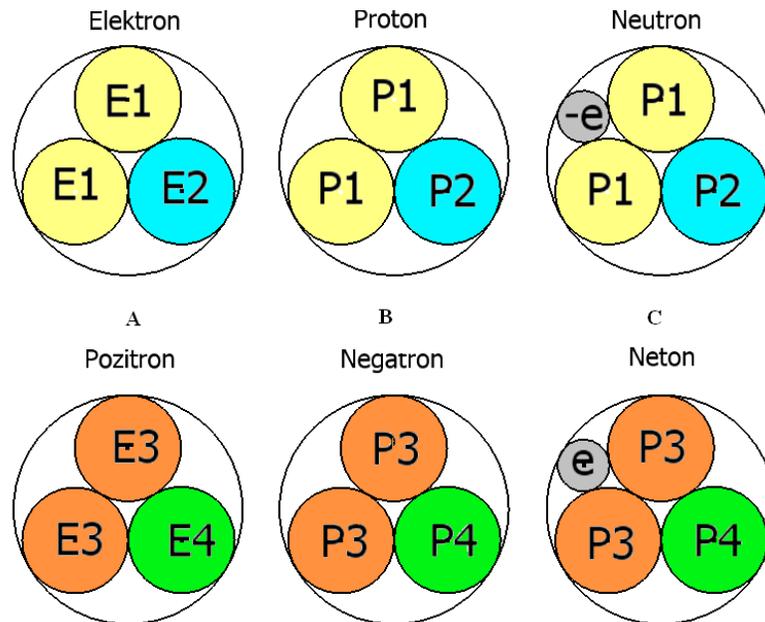
Its electric charge is:

$$(12) \quad -2 \cdot \frac{2}{3} \cdot e + \frac{1}{3} \cdot e = -1 \cdot e$$

Spin in this case is left and has the value:

$$(13) \quad 2 \cdot -\frac{1}{2} = \frac{1}{2}$$

Mass of both these aggregates is the same, because they themselves change only in the ratio of positive and negative electron's charges within them. There, both aggregates are stable as well. Proton decomposition is possible no earlier then if the proton extracts itself from atom's nucleus.



*Fig 1. Disposition of triplet's elements within proton, electron, neutron and their antiparticles*

Nature of interaction within the proton is like that of the electron, but their energy level is lower because of larger dimensions and therefore, larger spaces between interacted particles. However, if by decomposition the protons come reach the level of the electron's elementary triplets, they will have the same energy level.

Proton and negatron structures are showed in Fig 1.B.

### 4.3. NEUTRON AND NETON COMPOSITION

Creating neutrons and netons is different from that of the proton and negatron. According their scheme should be:

$$(14) \quad 2 \text{ }^r\text{P}^{e/3} + \text{ }^1\text{P}^{2e/3},$$

and for the neton:

$$(15) \quad 2 \text{ }^1\text{P}^{e/3} + \text{ }^r\text{P}^{2e/3}$$

This would obtain a neutral particle with right spin in the first case and left spin in the second.

Such a scheme, won't agree with results of experimental research, which gives a decomposition result of a proton and electron, or their antiparticles. Removing one triplet's element from such a structure would change the residual electric charge by 1/3 or 2/3 of the electron's charge. It is the sole variant when it combines one proton and electron for a neutron, and a negatron with a positron for the neton's structure. There is also the fact that a neutron has a somewhat greater mass than the proton. According to that scheme, a neutron's structure would be:

$$(16) \quad (2\text{P1}+\text{P2}) + (2\text{E1}+\text{E2})$$

And for the neton

$$(17) \quad (2\text{P3}+\text{P4}) + (2\text{E3}+\text{E4})$$

The electric charges are zero in both cases. The neutron's spin is right-handed and the neton's is left-handed. However, the state of affairs with spins is not so simple. Within these cases a difference between electromagnetic and mass spins must be made by a combination of triplet elements. The resultant electromagnetic spin is equal to zero because all electric charges are balanced. Menions interact with masions and results in only mass spin. It will be larger when there are uncompensated empty electrinos, where the electrion's electromagnetic inertia, and its direction will accord with the major electric charge. It will be positive for the neutron and negative for the neton. This circumstance for complete particles, is not essential because it acts only as mass momentum within free space. When it comes to their decomposition, the spins, have an electrodynamics component and become significant for the next interactive process.

The structure of the neutron and neton is represents i Fig.1C. Particles in this picture are not proportional but represent the fact that proton triplet elements are superior to the electron.

- By decomposition, the proton and electron separate one triplet's element from their structure and appear as particles with the next characteristics:
- They have 1/3 and 2/3 electric charge of the electron or proton,
- And 1/3 and 2/3 their masses.

All these newly-arising particles are unstable and quickly recombine into former structures. It might happen by itself though with small likelihood, that particles with two triplet elements

decompose to two separate elements as discrete particles with the appearance of a three element three-bit byte, with, of course, random frequency.

All created sub-atomic particles are uniquely determined in feature and do not depend on conditions within Limited space. The number of supplementary menions in them is smaller than with triplet elements because the spaces between them are larger and the forces are less.

Interaction between electrons and positrons, as between protons and netons are possible. Through existing interpretations of those interactions it acts to annihilation particles and transform matter to energy. According the postures of the NMN model, this interpretation does not have a physical grounding. This process represents only the liberation of their kinetic energy and the formation new particles:

- Elektron-positrons form particles named *binomal electron* or *biel*,
- Proton-netons form particles named *binomal proton* or *bipro*.

The mass of the newly formed particles is equal to double the electron or proton masses, and their electric charges are zero. The result of those interactions is radiation with a frequency, which depends on the quantities of liberated kinetic energy of the particles. Interaction forces within these particles are lower than within their components, witch have opposite and enlarged spins and greater distances to their center of gravity. Therefore it is easier to effect their decomposition than the decomposition of appropriate triplet elements, so that by the EMT function their easily occurs the repeated formation of appropriate triplets. The quantity of these pairs is much less than the quantities in subatomic particle engagements within material structures. By creating new atoms, they can create a source needed for subatomic structures. By providing EMT with enough energy as in cosmic rays, decomposition of those particles occurs but ensuing particles very soon recombine.

#### 4.4. VALUES OF SPINS

Analyzing structures of subatomic particles with respect to spin may conclude that all sub-atomic particles have a relative spin of  $\frac{1}{2}$ , because all sub-atomic structures combine with two spins of one sign with one spin of opposite sign. A general rule to form resultant spins of particles of different structure, with respect to representing the electronics of elementary triplets in them, may be cited as:

- Within a structure in which there is a difference of spins resulting in an odd number  $N_o$  the value of its relative electromagnetic spin is equal

- (18) 
$$S_o = \frac{1}{2} \cdot N_o$$

- When these differences are null or an even number  $N_e$ , the value of relative spin is:

- (19) 
$$S_e = N_e$$

Attached to this structure, also consider all particles that ensue by decomposition of more complexes system of particles through destruction of their subatomic components or appropriate triplet elements.

In this model formation of sub-atomic and atomic structures, as a virtual result their decomposition, many batch-related particles with short time-lives arise through various processes of decomposition. We cannot say that this model is in contrast to experiment, because no physical model exists with their characteristics. It only supplies an explanation for their creation. How far this will manage to explain their existence will be determined by more in-depth analysis of currently known experimental particles, regardless of their lifetimes.

#### **4.5. ENERGETIC LEVEL OF SUBATOMIC PARTICLES**

Dimensional relations, composition and states created subatomic particle defines their energy level, and thereby, their stability in an environment where there are many different possible influences and characteristics.

Electrons are the least and the lightest of all stable subatomic particles, pieced by three electronic elementary triplets. These constituent elements are closely packed and the interactive forces between them are at a high level, representing their potential energy. Their decomposition requires levels of energy that are not currently available. Even interaction with cosmic radiation, which has a stochastic nature, the potential for their decomposition appears very infrequently. The appearance of electronic neutrinos can be the result of similar processes.

The next in energy are the protons. Proton triplet elements have three order of magnitudes greater masses than electronic elementary triplets, while the electric charge is the same, as is the associated spin. What is the role of gravity in the interaction? The participation of gravitational forces reduces that of electrostatic and electrodynamic's forces. Gravity between proton triplet elements increases because their masses are greater, only this increase is reduced with an increase in distance between the elements. The part of mass' spin beyond not by one's weightiness to proton's stability. Electric charges remain the same because the charges within proton triplet elements compensate one another. However, in the same time, the distance between the particles' center of gravity is greater and we have a notable fall-off of electrostatic forces. From same argument, the intensities of electrodynamic interactions are reduced. For these reasons the energy levels of proton triplet elements are significantly reduced and allow decomposition by a lower energy level.

But the neutron is different than the proton because the added electron is the first to be removed. Subsequently, the decomposition process is the same as the proton. The connection of the electron with a proton in the structure of the neutron is weaker than the proton itself, based on a similar argument.

#### **5.PROCESSES ON A SUB-ATOMIC LEVEL**

On a subatomic level, virtual process that present themselves are as follows:

- Processes of programmable synthesis and decomposition of sub-atomic particles, which develop under the dominant influence of menions and GMF.
- Stochastic processes which occur spasmodically due to some disturbance or other temporary process within the observed space. Their results depend on the characteristics of the cause, kind, and state of the observed sub-atomic particles.

These processes also may be a synthesis, decomposition or induction of sub-atomic particles.

In either case, the interaction processes develop according to the laws of action and the conservation of masses and energies.

### **5.1.PROGRAMMABLE PROCESS**

The process of formation of sub-atomic particle, through a synthesis between appropriate supplementary particles, is programmable with menions and GMF as their initiator. Ensuing particles are stable structures which can resist energy disturbances that might change their structure or energy state, regardless of their origin. The transformations also may be programmable; in other words, changed by the action of menions and GMF. In either case, they have states within the range of observation. Within the study of subatomic processes, these deserve special attention because they represent observable Nature.

Inert phenomenal shape processes create structures that develop predominantly within transient periods that precede the formation and decay of black holes. By transition to quasi stationary states in limited space, the structures stabilize to a great extent and change solely by certain external conditions to which they may be exposed. But the living phenomenal shape transformation are programmable and are present from the moment embryos are created, to their deterioration and ultimate decay of their structures. The programming includes response to changes in their surroundings. The intensity and duration of these disturbances must stay within some limits in order that these living phenomenal forms can survive.

Both inert and living phenomenal forms are being exposed to random effects whose origin may be:

- Interaction with respective parts of the universe, whether that of EMW, with a broad range of frequencies, various particles, or other matter.
- As consequence of the impact of random processes during the transformation of respective parts of limited space to that of black holes or their decomposition.
- Laboratory research of sub-atomic particles.

The resultant interaction may change the particle's internal energy states or cause their decomposition. With respect to complex sub-atomic structures, there appears a broad spectrum of various particles who's is lifetime, as a rule, is very short and can be subject to recombination processes and reduced to primary subatomic particles by secondary processes of interaction.

### **5.2.STOCHASTIC PROCESSES.**

It is no matter that these processes are not within the normal functions required for the formation of the structures and appearance within inert and living matter. They are notable as conditions against which the structures remain constant, allowing attempts by experimental researchers to perceive the laws of nature. They allow perception of the methods by which the

processes develop under natural conditions. However, it is possible to reach false conclusions by this method and develop theories that retard our pursuit of a complete understanding of Nature.

With respect to their function, matter which isn't programmed will not have influence on the general state of their locality and content, and above all, on their living phenomenal shape. Individual observation is impossible, so that we must rely on statistical data based on batch processing of the results of experiment for our information. At the sub-atomic level we continually meet with problems: firstly with the technical aspect of nature and subsequently, with interpreting the results of experimental research.

The difficulty in the ongoing tracking of sub-atomic particles within natural or laboratory conditions represents a technical problem. A possible solution is tracking the subsequent effect of the motion of particles, particularly those that are charged. This allows us to assume similar actions for uncharged particles. However, by relying on secondary effects we lose contact with those that are primary, to the extent that they do not exist. This has contributed to our assumptions regarding the annihilation of matter and our attitude towards the transformation mass to energy and inversely, and a disregard for the conservation mass and energy. The particles simply disappear from the scene, which does not mean that they really do not exist. This process defines many postures within the theory of relativity and quantum mechanics. Limit of visibility engenders many bogus assumptions regarding sub-atomic particles. These postures themselves are at serious odds with the theories contained within the NMN model. It contains rigid observance of the laws of conservation of masses (material and electric) and energy which apply to all physical models of all interactive processes within science.

The second problem is the consequences of using these unfounded postures within the existing model of Nature, which is opposite to postures presents within NMN model. These postures are the basis for the theories associated with the process of creating and decomposing sub-atomic structures.

The definition of an electromagnetic waves represents the essence of these opposite postures. In the NMN model, EMW are an exactly define concept. They are wave processes within the most classical sense of the word, who's creators are electrion dipoles which oscillate around their centre of gravity, which is immovable. All interactions of EMW with matter represent the electromagnetic processes of oscillating electrion dipoles and electric charges within these structures. The current definition of EMW, is that it is something which can have both wave and particle characteristics, and the carrier this of this peculiarly defined feature is the photon. Therefore the dual appearance which represents one of fundamental magnitudes within contemporary physics and cosmology has no real physical foundation. Essentially modern theory still does not have a physical model of EMW.

The second opposed posture is connected with the proton and neutron model which features quarks. These quarks still are not assigned the attributes of self-contained particles, whose fundamental characteristics are give within Table no.1. The proton is composed of two quarks up and one quark down, while the neutron would consist of two quarks down and one quark up. This combination gives real values for the electric charges of these two particles. However, if these particles are within the proton or neutron, they will not be in conformity with the establish values of masses of either the proton or the neutron. This discrepancy is hostile to aspects of the NMN model.



components would be augmented if the possibility of decomposition of electronic elementary triplets to sub-elemental structures were added. Contingent upon the foregoing conditions of decomposition it is possible that many combinations could exist with different numbers of electron or proton triplet elements. The likelihood of their appearance depends to a great extent on the energy of entry within the interactive processes. As a result of these decompositions, there can appear particles which play a special role in the Standard model, such as quarks and some bosons, but they play only a secondary role within the scope of the NMN model and have no particular importance.

Table No.3

Subatomic particles	Proton triplet element		Elektronic elementary triplet	
	P1	P2	E1	E2
Elektron	-	-	2	1
Proton	2	1	3670	1835
Neutron	2	1	3670+2	1835+1

### 5.3.DECOMPOSITION OF SUBATOMIC STRUCTURES.

The decomposition of a subatomic particle can occur whether they are a free particle or a component of some atomic structure. Interacting processes are, in any case, very complex and depend on:

- Structures of atoms and subatomic particles ,
- Causes of decomposition
- Energetic levels of the causes,
- Conditions in which the interaction processes themselves create and cause the decomposition of particles.

With respect to the great complexity of all structures of electronic elementary triplets and the large range of energy levels, there are many possible causes for their decomposition. On the other hand, the possibly stochastic nature of their interaction processes results in their decomposition into particles with various characteristics, and concomitant electromagnetic processes with various frequencies.

Their complete systematization would be very difficult, and the question is how far it would be appropriate, with respect to their instability and short lifetimes. Nevertheless it is desirable to systematize some that are fundamental. This was done within the Standard model. Outside this systematization, there are more than a hundred registered particles. Even this number of

particles from the Standard model does not include all defined characteristics and their creation. The NMN model gives certain explanations for some of them.

Most decompositions are emission of electrons, but decomposition may include their nuclei also, with the ejection of a proton and/or a neutron. These decompositions are well known. Decomposition of protons, and especially electrons, have been explored more less, but one still encounters processes which cannot be explained by the existing model. I will try to discuss this problem more in depth within the NMN model.

### 5.2.1. Proton's decinoization

Explicatory process of the proton's decomposition shall commence from an analysis of its structure. It makes, within the formerly named hypothesis, the following proton triplet elements:

- Two proton triplet elements P1 composed of the combination of electronic elementary triplets  $k(E1+E3)+E3$ ,
- One proton triplet element P2 composed of the combination of electronic elementary triplets  $k(E2+E4)+E2$ .

It should be noted that constituent elements in brackets are electrically neutral because their electric charges annul and additional elements define the value and polarity of the electric charge of the proton. So proton triplet element P1 can touch off electronic elementary triplets E1 and E3 that mutually compensate, apart from one E3 which determines part of the proton's electric charge. The proton triplet element P2 state is the same, but by its combination of electronic elementary triplets E2 and E4, only one element, E2 is uncompensated. The overall proton's electric charge is  $e$ , as seen in expression (9).

As characteristic, that proton's structures it can be itself specify:

- Energy level interaction between proton triplets is high because it includes functioning masses and electromagnetic action due to their spins.
- Within proton triplet elements, however, interactions are more complex. Firstly it has compensating electronic elementary triplets whose interactions have only mass and mental components, because the Coulomb's forces between them are practically compensated. But distances between these elements are small, so concomitant forces have notable values. However, within the packages of compensating electronic elementary triplets, the Coulomb's forces are by way of exception, very large. This is how these packages represent particles with greater stability.
- Interaction between packages of compensating electronic elementary triplets E2 or E3 apply only to mass and mental interactions because of a greater distance between particles. Energy levels of these interactions are lower than the energy level of compensating packages because of the smaller masses of free electronic elementary triplets.
- Upermost energy levels have interactions within electronic elementary triplets by whose action all three forces have a connection with electrodynamic spin.

When protons interact with particles or EMW high energy, their occurs firstly the separation of free electronic elementary triplets and subsequently, a proton triplet. The result of this decomposition is the possible appearance of a great number of free uncompensated packages (E1+E3) and (E2+E4) who's electric charges are zero. As a result, their decompositions are possible through a great group of free electronic elementary triplets of the type E3 with positive electric charge  $2/3e$  and type E1 with negative electric charge  $-1/3e$ . Enhanced energy of particles, or EMW can come about the longer they act, on account of the greater number of free electronic elementary triplets, resulting in the appearance new structure formations with different electric charges. This phenomenon is observed in experimental research at high energy levels, but no reasonable explanations exist. Applying the paradox of transformation of energy  $\leftrightarrow$  mass in this case, doesn't resolve the problem, because it does not explain the appearance of great numbers of charged particles from the proton which have an electric charge equal to  $e$ , which contradicts the law of conservation of electric charge. Whereas existing models of elemental structures do not possess acceptable structures of sub-atomic particles that would give an explanation for this phenomenon, unless we accept the unacceptable theory that we can make something from nothing. The NMP model, defines these structures that enable a whole swarm of new charged particles with charges  $2/3e$ ,  $-1/3e$  and  $\pm e$ , without violating the law of conservation electric charges (by intensive interactions of sub-atomic particles with other particles or EMW with very high energy levels). In this model, there is the possibility of the appearance of hundreds of these charged particles from only one proton triplet element. The lifetime of these particles is very short, but adequate to incite astonishment and perplexity, as well as generate wrong theories about the processes..

The decomposition of electronic elementary triplets could come about by increasing the energy level of particles and EMW. However, necessary energy level for this decomposition is so high that it cannot be reached with available devices. Their appearance is possible only by a combination of devices and the favorable action of cosmic radiation.

The decomposition of a negatron is the same. Only the polarity would change.

### **5.2.2.Electron Decomposition.**

Between the decomposition of the proton and electron in relation to their antiparticles, there exists a formal likeness, but the energy level must be much higher for interactions with electrons. For removing electronic elementary triplets from the proton, the lowest energy level is required. This energy level is still approachable by available devices.

Decomposition of electronic elementary triplets is for the time being, above the capabilities of our devices. Interaction forces between sub-elemental aggregates within electronic elementary triplets are too high to effect decomposition. If possible in rare instances, they would cause the appearance of sub-elemental aggregates with various structures.

These decompositions, if even theoretical possible, would be so rare as to be not worth mentioning. Nevertheless if by chance, particles with very high energy levels interacted in inelastic collisions with electronic elementary triplets with sufficient force to extract part of their mass, there would emerge a neutral particle named the electronic neutron.

### **5.2.3.Neutron's Decomposition.**

Neutron decomposition is very similar to that of the proton. The difference is in neutron decomposition, there would be the appearance of one proton and one electron. The decomposition of the proton continues per the above, while the process of decomposition of the electron has a different character. By decomposition, the state of affairs is repeated, only in lieu of the appearance of a free electron, there would be a positron. The process of decomposition of the negatron is known.

#### 5.2.4. Neutrino's arising

Some unexpected appearances are noticed through investigations on the sub-atomic level. There appears a neutral particle named the neutrino. There are three types:

- Electron neutrino (e-neutrino),
- Muon neutrino ( $\nu_{\mu}$ -neutrino),
- Tau neutrino ( $\nu_{\tau}$ -neutrino).

In the process of creating sub-atomic particles, the interest is on the e-neutrino. Since the characteristics of the neutrinos are experimental estimates, there is an open issue regarding their position within family of sub-atomic particles. With respect to particles with short lifetimes, the question is, what is their weight and appearance and processes under normal conditions. What is their role within structures and how do they arise at their destruction. It is often not clear why they are needed. What is missing is both the physical picture and their action.

Given the available data from experimental research and the composition of subatomic structures, I suppose that a hypothesis about neutrinos should be establishing on follow facts:

- Masses of neutrinos are greater orders of magnitude than the masses of particles from whose decomposition they arise. These masses are:
- For e-neutrino  $<3 \times 10^{-6}$  [MeV].
- For  $\mu$ -neutrino  $<0,19$  [MeV].
- For  $\tau$ -neutrino  $<18$  [MeV].
- They have no electric charge.

From this data we reach the following conclusions:

- From sub-atomic structures it is possible to emit the following neutrinos:
- e- neutron from the electron, in regard to the core of electronic elementary triplets.
- $\mu$ -neutrino from the structure of the proton's triplet elements.
- $\tau$ -neutrino on account of its great mass can be emitted from the atom's core or some greater structures with compensating electric charges.

- Their emission can't be the result of electromagnetic interaction, because they have no electric charges, so they must emerge because of direct inelastic collisions with some fast particles.
- Following the loss of these masses by particles in such collisions, their aggregates should be manifest, and as far as is possible they should be recorded<sup>4</sup>.
- These are in support of the fact that the emission of a neutrino is from the neutral part of a core in which the forces of interactions are smaller than structures where there are acting electromagnetic forces.

These conclusions impose themselves because there is a theory that within the core of an electronic elementary triplet there are aggregates of neutral particles. If this is not true, the neutrinos would be the result of some secondary interactions and partial decomposition of electronic elementary triplets. In this case, it would annihilate the charges of particles, what must be registered at least as having a very short lifetime. That means there is left only a variant with emission from neutral particles, because the previous possibility does not apply. In the case of both electron and muon neutrinos, they arise from electronic elementary triplets and proton triplet elements as explained below.

Masses of separated neutrinos are at least three orders of magnitude less in relation to the masses of particles from whom there are emissions. It may be a smaller group of masses. In the case of neutrons, for example, it might be the group  $(2P_1+P_2)$ , and by neutrons the group  $(2P_3+P_4)$ .

Lastly, it is possible to define an hypothesis about the rise of neutrinos:

***By appearance, neutrinos exist through the decomposition of the electron and proton triplets and with neutrons, by interaction with some fast particles (it can be a neutral particle). Neutrinos with larger masses can originate only through emission of a number of neutrons from the nucleus of heavier chemical elements.***

Decomposition of a particle requires a significant consumption of energy, which is as large as the particle is small. For many sub-atomic particles, and particularly on sub-elementary levels, we do not have enough strong sources of energy which could decompose these particles. The occasional appearance of decomposed particles is solely by coincidence through synchronization of our devices and the function of cosmic rays with the motion of the particle's components. Thanks to such synchronization it is possible for the appearance of such a particle whether, prima facie, within processes of decomposition under the control of our devices, or the action of some charged particles under the influence cited above. Their appearance has a patently stochastic character.

## 6.CONCLUSION

Based on the NMN model, and the laws and the hypothesis contained therein, sub-atomic structures require only four supplemental magnitudes: electronic elementary triplets. Through

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<sup>4</sup> Whereas about neutral particles, their trail is a straight line and the change in their masses is less discernable. It may be only a change of speed of these particles but more data are needed because some additional influences may be acting.

them, before all menions and GMP, there was formed the fundamental particles of sub-atomic structures: electron, proton, neutron and their antiparticles (The standard model has 61 particles). Its virtue is the ability to form atoms of chemical elements, and subsequently all molecular structures by which all recognize materials of inert or living matter are created. Atoms and molecules represent one organized string of various structures and it can be considered stable within the defined outside conditions. They are constituent elements of true nature, which we still don't know well enough, and research into their structures and laws are worthy of prior attention. Information about particles arise through their decomposition through test devices or some periodic interactive processes within natural conditions,. These can be helpful in our attempt to perceive nature. Nevertheless, their value is smaller and mostly of short duration. Moreover, wrong theories obtained through our experimental and theoretical research, particularly when approached with a wrong hypothesis, can engender seriously mistakes and fallacies, which retard our knowledge of nature. I regard the proposed model of creating and decomposing sub-atomic structures, based upon the NMN model, as a great stride forward.

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