

1 Gravitational theory of construction of the physical world of particles of protons, electrons and neutrons

2 Svirschyk Vladimir

3
4 Abstract: Aim hired to show, that the real ways and methods of research and construction of elementary
5 particles of protons, electrons and neutrons, creation of their mathematical, structural and physical
6 models are. The put aim is arrived at by a construction, by means of primary fundamental particles of
7 mathematical, structural and physical models of protons, electrons and neutrons and realization of what
8 be going on in them physical processes.
9

10
11 Keywords: primary fundamental particles; particles of matter; gauge particles of matter; protons;
12 electrons; neutrons, fundamental co-operations; structural models; physical models
13
14

15 Introduction

16 In fundamental physics the all material must be presented as particles. Our world is arranged much
17 simpler, than we present, exists and form discrete particles and discrete laws of forming of particles. All
18 universes consist of great number of primary fundamental particles and great number of primary
19 fundamental anti-particles.

20 The fundamentally new gravitational theory of construction of the physical world of particles of
21 protons, electrons and neutrons, being based on existence of primary fundamental particles, is offered,
22 on education by the primary fundamental particles of particles of matter, on education by the particles of
23 matter of gauge particles of matter, on the construction of models of protons, electrons and neutrons by
24 means of gauge particles of matter.

25

26 1. Primary fundamental particles and anti-particles

27 There are primary fundamental particles and primary fundamental anti-particles that in the initial state
28 do not possess mass and charge. All particles of Universe appear from primary fundamental particles
29 and primary fundamental anti-particles. Modern models of кварков, leptons and elementary particles
30 erroneous, it is therefore impossible to apply primary fundamental particles to the existent models of
31 кварков and leptons. The new models of construction of particles are needed

32 The theory of construction of the physical world of particles includes fundamental cooperation's,
33 mathematical, structural and physical presentations of particles. Further development of fundamental
34 physics is possible only by the construction of mathematical and physical structures of elementary
35 particles being based on existence primary fundamental particles. The gravitational theory of
36 construction of the physical world of particles draws on the set of equalizations, laws and rules, based
37 on the real structures and physical principles. All universes consist of electric the neutral primary

38 fundamental particles and primary fundamental anti-particles that possess certain properties and
39 structure charged on the whole, that is able at certain terms to change a structure and configuration.
40 Primary fundamental particles create the different types of particles of matter. The particles of matter
41 create the different types of gauge particles of matter. The gauge particles of matter create кварки and
42 elementary particles. The particles of matter are created by the different types of gauge particles of
43 matter. Primary fundamental particles participate in the strong co-operating with each other; create
44 gravitation and electromagnetic fields, able to create an Eigen frequency and charge. Primary
45 fundamental particles, particles of matter, gauge particles, photons, elementary particles have own
46 configurations. All elementary particles consist only of primary fundamental particles.

47

48 3. Matter of physical particles

49 Theoretical physics a long ago is in an ideological crisis. It does not have a theory that logically, but not
50 as proofs, would explain the obvious fact of existence of surrounding us reality. There are only
51 interesting fantastic labors of separate authors, in that they dissert upon some large explosion allegedly
52 forming Universe. They paint the stakes of seconds, when in Universe there were unknown from what
53 electrons, neutrons, protons, after by minutes when kernels of hydrogen were, helium. By millenniums
54 and milliards of years - when atoms, bodies, stars, galaxies, were, planets et cetera, not explaining, on
55 the basis of what they give such conclusions. Not to mention about questions, why and as all of it could
56 happen, can not explain the elementary process of formation of atom of helium.

57 To explain the natural phenomena it is necessary to examine the world as really existing and objective.
58 The existent theories of construction of the physical world of particles are not able to explain nature
59 and structure of particles. Physical books are full difficult mathematical formulas. But beginning of
60 every physical theory is ideas and ideas, but not formulas. In obedience to the theory of construction
61 of the physical world of particles, energy of universe is formed by primary fundamental particles, and
62 dark energy is formed by primary fundamental anti-particles. The origin of primary fundamental
63 particles and anti-particles explains nature of energy and proves possibility of formation of mass by
64 means of energy. In spite of active researches, the theory of quantum gravitation while is not built. In
65 this connection only way of development of physics of elementary particles this opening of laws of
66 formation of particles and to expose physical nature of formation of particles and gravitation.

67

68

69 Existent pictures of matter it is a general term, determining a matter as great number of all content in
70 spaces and time and influencing on his properties. Exposes a structure and physical nature of this great
71 number and gives certain physical formulation to the matter gravitational theory of construction of the
72 physical world of particles. The gravitational theory of construction of the physical world of particles
73 eliminates existence of fermions and bosons and determines a matter as particle, possessing a structure,
74 configuration and physical properties. The particles of matter or particle of anti-matter have the
75 algorithm of forming of the logically completed particle from primary fundamental particles or from

76 primary fundamental anti-particles. A structure and configuration of particles of matter do not change in
77 the process of further transformations. Primary fundamental particles form the different types of
78 particles of matter: neutral particles matters - general for the landmarks of types of formations of matter,
79 different types of particles positive and negative matters and other types of particles of matter.

80

81 4. Gauge particles of matter

82 The neutral, positive and negative particles of matter form the gauge particles of matter. The gauge
83 particles of matter and photons have the different appearances of configurations, and every type of
84 configurations has a great number of powers. Configuration of particle appears by means of algorithm
85 of association of particles of matter in groups. Gauge particles of matter with identical configuration,
86 but with the different amount of primary particles differentiate on power.

87 For formation of elementary particle the gauge particles of neutral matter are needed and one of types of
88 gauge particles with a positive and subzero matter, thus the gauge particles of matter must have identical
89 configurations with the certain amount of powers. Gauge particles of pair matter, double pair matter, it is
90 consisted the triple pair matter of $2/3$ parts of positive matter and $1/3$ part of negative matter or from $1/3$
91 part of positive matter and $2/3$ parts of negative matter. There are other types of gauge particles of
92 matters. All gauge particles have a spin equal $S=1$. Gauge particles of neutral matter and gauge particles
93 pair positive and negative matters a proton, antiproton, form elementary particles. The gauge particles of
94 neutral matter and gauge particles of double pair positive and subzero matter are formed by the

95 elementary new Z anti-particles and new Z particles. The gauge particles of neutral matter and gauge
96 particles of triple pair positive and negative matter form elementary particles positron and electron.
97 New Z is an anti-particle it is an elementary particle that uniting, with a proton forms a neutron. New Z
98 is a particle it is an elementary particle that uniting, with an antiproton forms an antineutron. There are
99 other elementary particles, matters determined by gauge particles. The mathematical, structural and
100 physical models of gauge particles of matter and elementary particles are developed. Transformations
101 above primary fundamental particles, particles of matter, gauge particles of matter, photons at their
102 cooperation it is been absent. The gauges particles of matter by means of primary fundamental particles
103 participate in the strong co-operating with each other and capable create the running around
104 electromagnetic fields. The gauge particles of matter form elementary particles.

105

106 5. Configurations and powers

107 For formation of elementary particle the determined amount of gauge particles of matter of different
108 configurations and powers, law of forming of elementary particle and condition, is required for
109 connection of these particles. Configuration of particle appears by means of well-organized set of gauge
110 particles of matter and physical realization of processes what be going on in them. Elementary particles
111 consist of two types of gauge particles of matter with a few types of configurations and different
112 powers.

113 At formation of elementary particles in the beginning there is connection by certain rule of the least on
114 power neutral gauge particle of matter with the least on power the positive and negative gauge particles
115 of matter. Then there is successive connection of neutral gauge particles of matter with the positive and
116 negative gauge particles of matter as far as growth of their powers. For a construction by the elementary
117 particles of models of nucleons and atoms it is enough to know configurations elementary particles and
118 mechanism of co-operation between primary particles. The gauge particles of matter unite in groups at
119 the coincidence of their configurations, indexes positive and negative matters and accordance of
120 correlation to the positive and negative matter.

121

122 6. Resonators are in elementary particles

123 Basic property of elementary particles is their ability to participate in different connections that is
124 managed fundamental cooperation's. There are three types of fundamental cooperation's is strong
125 cooperation between primary fundamental particles, gravitational cooperation created by gauge
126 particles (by resonators) and electromagnetic cooperation is created by charges. Gravitational
127 cooperation by virtue of his small intensity at the level of elementary particles does not show up
128 practically, in too time mass of particle is only complete description of separate elementary particle.
129 There are particles with a zero mass (mass less particles). Such particle is a photon. A mass less particle
130 must move at a speed of equal velocity of light. Thus it possesses the fully defined values of energy.

131 Particles with a whole spin are photons and gauge particles of matter. Particles with a semi whole spin
132 are elementary particles. An own anti-particle corresponds every elementary particle, photon or gauge
133 particle of matter. The masses and backs of particle and corresponding anti-particle are equal. Mass of
134 elementary particle can be changed by joining of additional gauge particles of matter and passing of
135 elementary particle to the unstable state.

136 Resonators appear in elementary particles as a result of connection - neutral gauge particles of matter
137 with the pair positive and negative gauge particles of matter, neutral gauge particles of matter with the
138 double pair positive and negative gauge particles of matter, neutral gauge particles of matter with the
139 triple pair positive and negative gauge particles of matter. The gauge particles of matter in an elementary
140 particle must have identical powers and different configurations. A matter can be two kinds positive and
141 negative; therefore elementary particles create two types of the gravitational fields of attraction of
142 particles. Resonators set descriptions to the elementary particle - energy, electromagnetic field,
143 gravitation, charge.

144 In a proton and antiproton is for $5, 8957372239 \cdot 10^{24}$ resonators, and in an electron and positron for 3,
145 $21102648876 \cdot 10^{21}$ resonators. In the new Z anti-particle and new Z is a particle for 8,
146 $1081274556 \cdot 10^{21}$ resonators. Not all primary fundamental particles in an elementary particle create
147 the external quantum field - only resonators.

148

149 7. Spin of the particles

150 A spin of particle is internal, exceptionally quantum description that can not be explained within the
151 framework of relativistic mechanics. Permission of crisis of spin of proton matters not only for
152 understanding of spin but also for a study that, as protons and many other particles acquire the mass.
153 With in the frame work of theory of construction of the physical world of particles of backs of particle
154 arises up in resonators and determined by a relation: pair gauge particles of matter to the neutral gauge
155 particles of matter, double pair gauge particles of matter to the neutral gauge particles of matter and
156 triple pair gauge particles of matter to the neutral gauge particles of matter.

157

158 8. Sizes and frequency of resonators

159 Primary fundamental particles are formed in elementary particles by resonators (whirlwinds), where
160 primary fundamental particles hesitate with certain frequency, periodically change the sizes and create
161 the pulsating electromagnetic field. The sizes of resonators of elementary particles change with certain
162 frequency. At affecting of the external fields elementary particle there is an additional change of sizes
163 and frequency of resonator and at the strong affecting primary fundamental particles there is a change of
164 their configurations and sizes.

165

166 9. Gravitation is in elementary particles

167 Gravitation possesses the row of features sharply distinguishing it from other fundamental
168 cooperation's. The most surprising feature of gravitation is her small intensity. Therefore in description
169 of cooperation's of elementary particles in modern physics gravitation is not taken into account.
170 Gravitation created a universe and all elementary particles. Force of gravitation, operating between
171 particles, always is attractive power: it aims to draw together particles. In physics of elementary
172 particles a standard model eliminates gravitation, while gravitation is only complete description of
173 elementary particle.

174 Nature of formation of gravitation differs from nature of formation of strong cooperation between
175 primary fundamental particles and electromagnetic cooperation. Gravitation is created by resonators in
176 elementary particles at cooperation of primary fundamental particles and change of their own rate of
177 movement. Gravitation arises up in elementary particles as a result of cooperation of gauge particles of
178 matter and by formation of resonators. A graviton does not exist, transmission of gravitation from one
179 particle it is impossible to other - there is only addition of the gravitational fields created by resonators.

180 All primary fundamental particles in elementary particles participate in creation of gravitation.
181 Gravitation created by elementary particles, it is possible to be examined as independent structural and
182 physical models. Motion of primary fundamental particles and their associations at a speed of light this
183 natural state. A gravitation created a universe by the change of own rate of movement of primary
184 fundamental particles in resonators at cooperation of gauge particles of matter. A universe exists as the
185 virtual world of gravitation.

186

187 10. Space and distances are in elementary particles

188 Space in elementary particles appears in a number of the united inter se parallel planes consisting of
189 gauge particles of matter. Space is created primary fundamental particles, particles of matter, by the
190 gauge particles of matter in elementary particles homogeneously and isotropic. Primary fundamental
191 particles can change a structure and configuration; as a result distance changes between the groups of
192 primary particles, other parameters of gauge particles of matter of elementary particles change.

193 Distance between the groups of primary fundamental particles in the gauge particles of matter in
194 elementary particles constantly and can change at certain terms discretely. Therefore in space of
195 particles there is not a necessity to enter the base concept of mathematics is distance between two points
196 of space, to apply difficult metrical spaces for description of particles. Structure and configuration of
197 constituents Universe of particles, and their transformation to another structures and configurations it is
198 necessary to examine in the process of origin of Universe, foremost, from the point of view of existence
199 of primary fundamental particles and primary fundamental anti-particles that is able to explain the origin
200 of Universe. Therefore exactly from the construction of theory of origin of different types of physical
201 particles makes sense to talk about an origin and formation of Universe and all that exists in it.

202 There will always be reason originative that or another phenomenon. It is therefore necessary to
203 examine our world not from the point of view of his origin, and from the point of view of existence of
204 primary structures and configurations of particles of Universe and transformation of primary structures

205 and configurations of particles of Universe to another various types of structures and configurations of
206 particles. It is thus necessary to examine those processes and particles that are in our Met galaxy
207 exceptionally, arose up, together with it, id est. all that exists really, is within the limits of our world.

208 Task by education our world this is a task on determination, as a great number of various structures and
209 configurations of different physical particles arose out of primary homogeneous structures and
210 configurations of physical particles. Formation of Universe is examined therefore, as a process of
211 transformation of her primary structures and configurations, consisting of great number of homogeneous
212 physical particles, being in equilibrium, homogeneous integrity, with by a great number structures and
213 configurations of various physical particles.

214

215 11. Time is in elementary particles

216 For processes what be going on in the separate taken plane of space of elementary particles, time does
217 not exist. Time, as well as mass, in elementary particles, resonators, that appear as a result of connection
218 of parallel planes consisting of gauge particles of matter, determine, in space. Frequency of resonator in
219 an elementary particle sets time. A pulsating resonator is the chronometer of time for an elementary
220 particle.

221 If frequency of vibrations is discrete, time means discretely and homogeneously. Time changes at the
222 change of frequency of resonator. Primary fundamental particles, particles of matter, gauge particles of

223 matter and photons, do not contain resonators, consequently, time does not exist for them, and they
224 always move at a speed of light.

225

226 12. Stability of elementary particles

227 The amount of powers and configurations of quarks determine stability of elementary particles and them
228 X is a measure position in space. Steady elementary particles, for example proton, antiproton and
229 positron, electron are in a 13-measure space. Unsteady elementary particles, for example Z are anti-
230 particles and Z particles are in an 8-measure space. Mass of elementary particle, determined resonators,
231 influences on its stability. Her descriptions change with the increase of mass of elementary particle.

232 Weak cooperation is not fundamental, and there is investigation of the unstable state of particles.

233 Disintegration of particles of neutron and antineutron is an example of the unstable state of these
234 particles. At disintegration of Z anti-particles appear electron with energy 0, 51 MэВ, electronic neutrino
235 with energy 0,012 MэВ and energy of radiation. There are a great number of other laws of forming of
236 steady and unsteady particles as a result; new elementary particles being in other X - a measure space
237 appear.

238

239 13. Comparative analysis of two models

240 For the construction of physical model of proton the method of mathematical induction was used for
241 particles, and at the construction of standard model method of mathematical deduction for the fields
242 created by particles. These fundamental differences result in the different models of elementary
243 particles. Physicists assert that a standard model is built on the basis of experimental data about
244 particles, and then both models must have general physical views about particles.

245 A standard model eliminates any physical view, but comparing two models, maybe, to present to the
246 package as a resonator that is the source of gravitation. A standard model does not describe gravitation.

247 Further, basic function of standard model, maybe, to present as a gauge neutral matter of physical
248 model of proton, a standard model eliminates a matter from the presentation. Et cetera, every element of
249 standard model is possible to present the physical element of physical model, for example proton.

250 A standard model presents strong nuclear cooperation's as a result of exchange virtual particles. The
251 theory of construction of the physical world of particles assumes only an association and disintegration
252 of particles at strong cooperation between primary fundamental particles; transformations above
253 particles or exchange are eliminated particles. At formation of component particles by means of
254 elementary particles there is cooperation only between primary fundamental particles being on the
255 perimeter of elementary particle, other primary particles do not participate in cooperation's. These
256 connections of elementary particles are analogical to cooperation's between primary fundamental
257 particles into a particle.

258 There is not a necessity for every type of particles to enter the own mechanism of cooperation,
259 sufficiently to know configuration of particle. Particles can not grow into each other or interchange
260 primary fundamental particles, they can only unite inter se or disintegrate, if are in the unstable state.
261 Models of quarks the elementary particles offered by a standard model, helpless theory. There is not
262 explanation of existence of mass of кварков in a standard model; the base of standard model is built on
263 the mathematical unitary groups based on an exchange (that does not exist) by fundamental bosons at
264 cooperation of particles.

265 To Paula Xiggs exists, because there is gravitation, but the model of origin of this field is not faithful,
266 boson of Xiggs can not exist in principle. Electroweak cooperation can not create gravitation.
267 Gravitation is created in elementary particles by resonators. By means of theory of construction of the
268 physical world of particles, maybe, to build the real quantum theory of the field, but her practical
269 application is not expedient.

270 Standard model used by modern theoretical physics of elementary particles for description of strong
271 cooperation small effective, a gravitation a standard model does not describe, weak cooperation does not
272 exist. A limit application of standard model is electromagnetic cooperation's.

273 For description of strong cooperation between primary fundamental particles introduction of the
274 quantum fields is not required. At consideration of dynamic cooperation of the incorporated primary
275 particles it is not required to enter the quantum field, mathematical vehicle of quantum theory of the
276 field - it is enough to consider configuration of particles and mechanism cooperation of two groups of

277 primary fundamental particles. Any elementary particle consists of primary fundamental particles and
278 not determined by the quantum field at strong cooperation.

279 By mistake to present an elementary particle as a quantum of the excited field. Most physicists of
280 theorists by means of the universal field try to describe all processes what be going on in elementary
281 particles that is practically impossible. Construction of standard model of physics of elementary
282 particles, not leaning against knowledge of their configurations and physical models of elementary
283 particles, little perspective direction.

284 The model of construction of the world of particles can exist, if with her help, maybe, to create the
285 simplest element of universe - proton. By the offered theory of construction of the physical world of
286 particles it is possible to create an artificial proton. Proton is not the only simplest element of universe,
287 exist and another simplest elements of universe are similar to the proton. Perhaps there is other particles
288 elementary form the simplest elements similar to the proton. If it creates an artificial proton or proton
289 like the simplest element, it is possible to create other artificial chemical elements with the help of
290 primary elementary particles appear.

291

292 14. Quarks is in elementary particles

293 Appearing by means of gauge particles matters are elementary particles, maybe, conditionally to break
294 up on quarks. Quarks exist conditionally because the methods of forming of elementary particles

295 eliminate possibility of their independent existence. Quarks appear in elementary particles as a result of
296 connection of gauge particles of matter. Quark this association of gauge particles of matter with two
297 types of configurations and different powers, not knowing configuration of quark building an
298 elementary particle is impossible.

299 Quarks it is impossible to extract from elementary particles or build an elementary particle from quarks.
300 In elementary particles for the observance of terms of symmetry two pairs of quarks appear is quark and
301 anti-quark that differ from each other correlation positive and negative gauge. For every elementary
302 particle there is the law of forming of quarks. Laws on those quarks of elementary particles are formed,
303 and connections between them are worked out.

304

305 15. Charges are in elementary particles

306 In elementary particles depending on configurations of gauge particles of matter in quarks two types of
307 charges appear positive or negative. Into an elementary particle the charges of quarks can compensate
308 each other. A charge of кварка on the whole can be equal to the zero. In a proton or antiproton only 260
309 from $5,8957372239 \cdot 10^{24}$ resonators create a charge, other charges compensate each other.

310

311 16. Elementary particles are a proton and antiproton

312 A proton and antiproton possess an underlying structure and configuration. The hypothesis of
313 construction of quarks, offered by a standard model, did not result in establishment of underlying
314 structure and configuration of proton and is erroneous direction in the study of particles. The model of
315 quarks of elementary particles of standard model offered for explanation of variety of andiron, but it
316 explains nothing internal structure of some from these particles and has no physical sense.

317 Realization is absent until now, what laws the mechanism of forming of structure and configuration of
318 proton and anti-proton is built on. From it nature does not find explanation the masses of proton and
319 anti-proton, that is determined experimentally. The theory of formation of mass of proton and anti-
320 proton is presently absent. From all heavy particles a proton is an only steady particle. A proton is basis
321 of all difficult material formations of Universe.

322 The world the existence is under an obligation to the proton and primary fundamental particles that form
323 it. The theory of underlying structure and configuration of proton and anti-proton will open access to the
324 new methods of receipt of energy. Mastering of energy of proton and anti-proton can become a major
325 factor in the decision of power problem. To expose internal a structure and configuration of proton and
326 anti-proton and the theory of construction of the physical world of particles allows creating the theory of
327 his underlying structure.

328 A proton and anti-proton, in obedience to a physical model, consist of $5,8957372239 \cdot 10^{25}$ identical
329 well-organized primary fundamental particles. All primary fundamental particles of proton and anti-
330 proton participate in creation of gravitation and charges. Primary fundamental particles in a proton and

331 anti-proton form the neutral particles of matter, positive particles of matter and negative particle of
332 matter. Neutral gauge particles are matters, consisting of neutral particles matters, a pair gauges particle
333 matters consisting of positive particles of matter and negative particles of matter, in a proton and anti-
334 proton form 5 types of quarks of A1, A2, A3, A4, and A5. Quarks of A1, A2, A3, A4, A5 differ in inter
335 se the different types of configurations and have a different amount of powers.

336 In a proton A5 is anti- quark in relation to quark of A1, and A4 is anti- quarks in relation to quarks of
337 A2. In an anti-proton A1 is anti- quarks in relation to quarks of A5, and A2 is anti- quarks in relation to
338 quarks of A4. Every quark consists of gauge particles of matter of two configurations. Quarks of A1,
339 A2, A3 in a proton consist of neutral particles of matter, $\frac{2}{3}$ parts of positive particles of mother and $\frac{1}{3}$
340 parts of negative particles of mother, and quarks A4, A5 consists of neutral particles of matter, $\frac{1}{3}$ parts
341 of positive particles of matter and $\frac{2}{3}$ parts of negative particles of matter.

342 Quarks of A1, A2, A3 in an anti-proton consist of neutral particles of matter, $\frac{1}{3}$ parts of positive
343 particles of mother and $\frac{2}{3}$ parts of negative particles of mother, and quarks of A2, A4 consists of
344 neutral particles of matter, $\frac{2}{3}$ parts of positive particles of matter and $\frac{1}{3}$ parts of negative particles of
345 matter. The masses of quarks of A1, A2, A3, A4, A5 are in correlation 28: 10: 1: 10: 28. Methods of
346 forming of quarks of A1, A2, A3, A4, A5 are expounded in-process [1].

347 Every quark of A1, A2, A3, A4, A5 consists of 13 groups of different powers of two gauge particles of
348 matter with two types of configurations. A proton and anti-proton are formed as follows: in the
349 beginning the first groups of quarks of A1, A2, A3, A4, A5, unite with the least powers, after the second

350 groups of quark with the least powers of A1, A2, A3, A4, A5 et cetera as far as growth of their powers.
351 All quarks of A1, A2, A3, A4, A5 create is the gravitational field. Charges of quarks of A1, A5, A2,
352 A4 on the whole equal to the zero, and the charge of quark of A3 is equal to the charge of proton or anti-
353 proton.

354 Primary particles are formed in a proton and anti-proton by resonators (whirlwinds), where primary
355 particles of resonators hesitate with certain frequency, periodically modifying the sizes. A proton and
356 anti-proton have own variable (pulsating) space and time that changes under the action of external
357 influences. All resonators of proton and anti-proton hesitate with one frequency.

358 If to unite primary fundamental particles on a certain law in groups (or, that to unite the same quark of
359 A1 with quark of A5 and to unite quark of A2 with quark of A4), then a proton and anti-proton can be
360 presented as three quarks. Then, the groups of primary fundamental particles form in a proton and anti-
361 proton, incorporated neutral particles of matter, incorporated positive particles of matter and
362 incorporated negative particles of matter. The incorporated neutral gauge particles are matters consisting
363 of the incorporated neutral particles of matter, incorporated pair gauge particles matters consisting of the
364 incorporated positive particles of matter and incorporated negative particles of matter, in a proton and
365 anti-proton form 3 types of quarks of $F1=A1+A5$, $F2=A3$, $F3=A2+A4$.

366 Quarks of F1, F2, and F3 differ inter se on configuration and power. Every quark consists of the
367 incorporated gauge particles of matter of two configurations with different powers. The masses of

368 кварков of F1, F2 and F3 are in correlation 56: 1: 20. Methods of forming of quarks of F1, F2, and F3
369 are expounded in-process [1].

370 Every quark of F1, F2, and F3 consists of 13 groups identical on configuration, but different on power
371 connections of two gauge particles. A proton is formed as follows: in the beginning the first three groups
372 of quarks unite with the least powers of F1, F2, F3, after the second three groups of quarks with the least
373 powers of F3, F2, F1 et cetera as far as growth of their powers. All quarks of F1, F2, F3 create is the
374 gravitational field.

375 Charges of quarks of F1, F3 on the whole equal to the zero, and the charge of quark of F2 is equal to the
376 charge of proton. The Eigen frequency of proton is set by quark of F2. Maybe, quarks of F1 and F3 it is
377 associations of the neutral being in the constrained state in the proton of pi-mesons. An antiproton
378 differs from a proton correlation of positive and negative pair gauge matter.

379

380 18. Elementary particles are an electron and positron

381 An electron and positron, in obedience to a physical model, consist of $3, 21102648876 \cdot 10^{22}$ identical
382 well-organized primary fundamental particles, thus every primary fundamental particle participate in
383 creation of gravitation, charge. Primary fundamental particles in an electron and positron form the
384 neutral particles of matter, positive particles by a matter and negative particles of matter.

385 Neutral gauge particles are matters consisting of neutral particles of matter, triple pair gauge particles
386 matters consisting of positive particles of matter and negative particles of matter, in an electron and
387 positron form 9 types of quarks of A6, A7, A8, A9, A10, A11, A12, A13, A14.

388 Quarks of A7, A8, A9, A10, A11, A12, A13, A14 differ in inter se the different types of configurations
389 and have an equal amount of powers. Every quark consists of gauge particles of matter of two
390 configurations. Quarks of A6, A7, A8, A9, A10, A11 in an electron consist of neutral particles of matter,
391 1/3 parts of positive particles of matter and 2/3 parts of negative particles of matter. Quarks of A12,
392 A13, A14 in an electron consist of neutral particles of matter, 2/3 parts of positive particles of mother
393 and 1/3 parts of negative particles of mother.

394 Quarks of A6, A7, A8, A9, A10, A11 in a positron consist of neutral particles of matter, 2/3 parts of
395 positive particles of matter and 1/3 parts of negative particles of matter. Quarks of A12, A13, A14 in a
396 positron consist of neutral particles of matter, 1/3 parts of positive particles of mother and 2/3 parts of
397 negative particles of matter. The masses of quarks of F12 A6, A7, A8, A9, A10, A11, A12, A13, and A14
398 are in correlation 3: 80: 2188: 1: 28: 728: 3: 80: 2188. The methods of forming of quarks of A6, A7, A8,
399 A9, A10, A11, A12, A13, A14 is analogical to the methods of forming of quarks in protons, differ in
400 only correlation of particles of matter and configurations.

401 Every quark of A6, A7, A8, A9, A10, A11, A12, A13, and A14 consists of 13 groups of different powers
402 of two gauge particles of matter with two types of configurations. An electron and positron are formed
403 like a proton. All quarks of A6, A7, A8, A9, A10, A11, A12, A13, and A14 create - gravitation.

404 Charges of quarks of A6, A7, A8, A12, A13, and A14 on the whole equal to the zero, and charges of
405 quarks of A9, A10, and A11 is equal to the charge of electron or positron.

406 Primary fundamental particles are formed in a positron and electron by resonators (whirlwinds), where
407 primary particles of resonators hesitate with certain frequency, periodically modifying the sizes.
408 Electron and positron have own variable (pulsating) space that changes under the action of the external
409 fields. All resonators of electron and positron hesitate with one frequency. Quarks in an electron and
410 positron has more complicated configuration, than in a proton.

411
412 If to unite primary fundamental particles on a certain law in groups, then an electron or positron can be
413 presented as three quarks. Then, the groups of primary fundamental particles in an electron or positron
414 form the incorporated neutral particles of matter, incorporated positive particles of matter and
415 incorporated negative particles of matter. The incorporated neutral gauge particles are matters consisting
416 of the incorporated neutral particles of matter, incorporated triple pair gauge particles matters consisting
417 of the incorporated negative particles of matter and incorporated positive particles of matter, in
418 elementary particles electron or positron form 3 types of quarks of $F4=A6+A7+A8$, $F5=A9+A10+A11$,
419 $F6=A12+A13+A14$.

420 Every quark consists of the incorporated gauge particles of two configurations with different powers.

421 Quarks of F4, F5, and F6 differ inter se on configuration and power. The masses of quarks of F4, F5,
422 and F6 are in correlation 3: 1: 3. Methods of forming of quarks of F4, F5, and F6 are expounded in-
423 process [1]. Every quark of F4, F5, and F6 consists of 13 groups identical on configuration, but different
424 on power connections of two gauge particles.

425 An electron or positron is formed as follows: in the beginning the first three groups of quarks unite with
426 the least powers of F4, F5, F6, after the second three groups of quarks with the least powers of F4, F5,
427 F6 et cetera as far as growth of their powers. All quarks of F4, F5, F6 create is the gravitational field.

428 Charges of quarks of F4, F6 on the whole equal to the zero, and the charge of quark of F5 is equal to the
429 charge of proton. The Eigen frequency of electron or positron is set by quark of F5. A positron differs
430 from an electron correlation of positive and negative triple pair gauge matter.

431

432 17. Component particles are a neutron and antineutron

433 One of main problems of the guided thermonuclear synthesis is structural and physical process of
434 formation of atom of helium. A neutron and antineutron are component particles. A neutron consists of
435 proton and new Z is anti-particles, and an antineutron consists of antiproton and new Z particle. New Z
436 is anti-particles and Z particles, maybe in another kind, make part of universe together with hydrogen.

437 New Z is anti-particles and Z particles, in obedience to a physical model, consist of 8,

438 $1081274556 \cdot 10^{22}$ identical well-organized primary fundamental particles. The masses of new Z are

439 anti-particles and Z particles make for 2, 300277109*10⁻³⁰ kg. Elementary Z an anti-particle, uniting
440 with a proton, forms a neutron. Elementary Z a particle, uniting with a proton, forms an anti-neutron.

441 Primary fundamental particles are in new Z anti-particles and Z particles form the neutral particles of
442 matter, positive and negative particles of matter. All primary fundamental particles are in new Z anti-
443 particles and Z particles participate in creation of gravitation and charges. Neutral gauge particles are
444 matters consisting of neutral particles of matter, double pair gauge particles matters consisting of
445 positive particles of matter and negative particles of matter, in new Z anti-particles and Z particles form
446 6 types of quarks of A15, A16, A17, A18, A19, A20.

447 Quarks of A15, A16, A17, A18, A19, A20 differ in inter se the different types of configurations and
448 have a different amount of powers. In Z anti-particles of A20 is anti-quark in relation to quark of A15,
449 and A19 is anti-quark in relation to quark of A16. In Z particles of A15 is anti-quark in relation to quark
450 of A20, and A16 is anti-quark in relation to quark of A19. Every quark consists of gauge particles of
451 matter of two configurations. Quarks of A15, A16, A17, A18 is in Z anti-particles consist of neutral
452 particles of matter, 1/3 parts of positive particles of matter and 2/3 parts of negative particles of mother.
453 Quarks of A19, A20 in Z - anti-particles consist of neutral particles of matter, 2/3 parts of positive
454 particles of matter and 1/3 parts of negative particles of matter. Quarks of A15, A16, A17, A18, A19,
455 A20 is in Z - particles consist of neutral particles of matter, 2/3 parts of positive particles of matter and
456 1/3 parts of negative particles of mother. Quarks of A19 and A20 is in Z - particles consist of neutral
457 particles of matter, 1/3 parts of positive particles of matter and 2/3 parts of negative particles of matter.

458 Массы кварков A15, A16, A17, A18, A19, A20 находятся в соотношении 28:10:1:1:10:28. Методы
459 формирования кварков A15, A16, A17, A18, A19, A20 изложены в работе [1]. The masses of quarks
460 of A15, A16, A17, A18, A19, A20 are in correlation 28: 10: 1: 1: 10: 28. Methods of forming of quarks
461 of A15, A16, A17, A18, A19, A20 are expounded in-process [1].

462 Every quark of A15, A16, A17, A18, A19, A20 consists of 8 groups of different powers of two gauge
463 particles of matter with two types of configurations. New Z is anti-particles and Z is particles formed as
464 follows: in the beginning the first groups of quarks of A15, A16, A17, A18, A19, A20, unite with the
465 least powers, after the second groups of quarks with the least powers of A15, A16, A17, A18, A19,
466 A20 et cetera as far as growth of their powers. All quarks of A15, A16, A17, A18, A19, A20 create is
467 the gravitational field. Charges of quarks of A15, A20, A16, and A19 on the whole equal to the zero,
468 charges of quarks of A17, A18 in new Z - the anti-particle equal to the charge of electron, charges of
469 quarks of A17, A18 in new Z - the particle equal to the charge of positron.

470 Primary fundamental particles are formed in Z anti-particle and Z particle resonators (whirlwinds),
471 where primary particles of resonators hesitates with certain frequency, periodically modifying the sizes.

472 New Z is anti-particles and Z particles have own variable (pulsating) space and time that changes under
473 the action of external influences. All resonators are in new Z anti-particles and Z particles hesitate with
474 one frequency. New Z is an anti-particle and differs from new Z are particles by correlation of positive
475 and negative double pair gauge matter. The laws of forming of the new Z anti-particles and Z of
476 particles are analogical the laws of forming of particles of protons and antiprotons.

477 If to unite primary fundamental particles on a certain law in groups (or to unite quark of A15 with anti-
478 quark of A20, to unite quarks of A16 with anti-quark of A19 and unite quarks of A17, A18), then
479 elementary Z anti-particle and Z a particle can be presented as three quarks. Then, groups of primary
480 fundamental particles in new Z anti-particles and Z particles form, incorporated neutral particles of
481 matter and incorporated positive particles of matter and incorporated negative particles of matter.

482 The incorporated neutral gauge particles are matters consisting of the incorporated neutral particles of
483 matter, incorporated double pair gauge particles matters consisting of the incorporated negative particles
484 of matter and incorporated positive particles of matter, in elementary Z anti-particles and Z particles
485 form 3 types of quarks of $F7=A15+A20$, $F8=A17+A18$, $F9=A16+A19$. Quarks of $F7$, $F8$, and $F9$ differ
486 inter se on configuration and power.

487 Every quark consists of the incorporated gauge particles of matter of two configurations with different
488 powers. The masses of quarks of $F7$, $F8$, and $F9$ are in correlation 28: 1: 10. Methods of forming of
489 quarks of $F7$, $F8$, and $F9$ are expounded in-process [1]. Every quark of $F7$, $F8$, and $F9$ consists of 8
490 groups identical on configuration, but different on power connections of two gauge particles.

491 Elementary Z is anti-particles and Z are particles formed as follows: in the beginning the first three
492 groups of quarks unite with the least powers of $F7$, $F8$, $F9$, after the second three groups of quarks with
493 the least powers of $F7$, $F8$, $F9$ et cetera as far as growth of their powers.

494 All quarks of $F7$, $F8$, $F9$ create is the gravitational field. The charges of quarks of $F7$ and $F9$ on the
495 whole are equal to the zero, and a charge of quarks of $F8$ is in Z the anti-particle equal to the charge of

496 electron, and a charge of quark of F8 is in Z - the particle equal to the charge of positron. Eigen
497 frequency of Z is anti-particles and Z particles are set by quark of F8. Maybe, quarks of F7 and F9 it is
498 associations of the neutral being in the constrained state in Z anti-particles and Z particles pi-mesons,
499 quark of F8 in Z anti-particle it association of the negative being in the constrained state pi-masons and
500 quarks of F8 in Z particles it is associations of the positive being in the constrained state of pi-masons.
501 New Z is anti-particles and Z particles differ in correlation of positive and negative double pair gauge
502 matter.

503

504 Conclusion

505 Conclusions, got as a result of consideration of gravitational theory of construction of the physical
506 world of particles, being based on: existence of primary fundamental particles and primary fundamental
507 anti-particles, education by the primary fundamental particles of particles of matter and primary
508 fundamental anti-particles of particles of antimatter, on education by the particles of matter of gauge
509 particles of matter and photons, constructions of elementary particles by means of gauge particles of
510 matter:

511 —it is all universe consist of primary fundamental particles and primary fundamental anti-particles

512 —primary fundamental particles form the different types of particles of matter

513 —primary fundamental anti-particles form the particles of anti-matter

514 —the particles of matter form the gauge particles of matter and photons
515 —exist a great number of types of gauge particles of matter is gauge particles of neutral matter,
516 different combinations of variants of positive and negative gauge particles of matter and another
517 —the gauge particles of matter have different configurations and powers
518 —the gauge particles of matter are able to create the running around electromagnetic fields
519 —elementary particles arise up as a result of connection of gauge particles of matter
520 —all elementary particles consist of eventual number of primary fundamental particles
521 —resonators in elementary particles appear as a result of connection of gauge particles of matter
522 —resonators determine energy, gravitation and charge of particle
523 —quarks exist only in elementary particles
524 —quarks depending on configuration of gauge particles can have positive or negative charges or not to
525 have a charge
526 —a proton and anti-proton are elementary particles and consist of five different on configuration and
527 powers quarks
528 —elementary new Z is anti-particles and new Z particles consist of six different on configuration and
529 powers quarks

530 —elementary new Z is anti-particles, Z particles and particle of electronic neutrino have identical laws
531 of forming

532 —a positron and electron are elementary particles and consist of nine different on configuration and
533 powers quarks

534 - A neutron consists of two elementary particles - proton and new Z anti-particle

535 - An anti-neutron consists of two elementary particles - proton and new Z particle

536 - Energy of electronic neutrino is equal to $0,012 \text{ MeV}$

537 - In protons and electrons a charge creates one quark

538 - In new Z anti-particles and new Z particles a charge is created by two quarks

539 - In the gauge particles of matter and elementary particles distance between primary particles constantly

540 - In elementary particles time changes discretely

541 - Stability of elementary particles is determined by the amount of powers and configuration of quarks

542 -spin particles determined by the relation of gauge particles of matter

543 - there are only three types of fundamental cooperation's is strong cooperation between primary
544 fundamental particles, gravitational cooperation created by gauge particles (by resonators) and
545 electromagnetic cooperation is created by charges

546 - coming from, from properties of physical models of elementary particles the use of accelerating of
547 elementary particles (for example, LHC) for their research having no prospects, a proton consists only
548 of primary fundamental particles, quarks separately from an elementary particle not

549 - The standard model used by modern theoretical physics of elementary particles can be used only for
550 partial description of electromagnetic cooperation

551 - the physical models of elementary particles and mechanism of cooperation of two groups of primary
552 fundamental particles suffice for consideration of dynamic cooperation's of particles

553 The offered models of construction of the physical world of particles show that their mathematical,
554 structural and physical models, promising the rapid opening, substantial scientific and economic breach,
555 are. Possibility appears: creations and opening of new elementary particles, for example, of the simplest
556 elements similar to the proton, new Z anti-particles and Z particles, to present the physical models of
557 disintegration and formation of new Z anti-particles and Z particles, construction of physical models a
558 neutrino, to present fundamentally new mathematical, structural and physical to the model of the
559 periodic system of chemical elements. The receipt of new chemical elements and materials is possible
560 with the set properties, opening of new energy sources.

561 List of literature:

562 1. Svirschyk V.V. Proton methods of transformation of information// are the Electronic scientific
563 magazine of "PHYS-MAT". - 2014. It is Producing on April-Junes, 2 (16). C. 11-13. [Electronic
564 resource].