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Discovery

Birth of Earth, Moon and Mars, owing to explosive disintegration Proto-Earth

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ABSTRACT

Originally Earth was a rotating hot plasma clot thrown out from the young Sun in cold space. Then it was transformed to the extended similar pear body with a viscous mantle and dynamically the extremely unstable gas core of a difficult form. Inevitable nuclear explosive disintegration of this body became the reason of separation from its ends of a mantle's large parts. The central body which has remained after a separation of the ends of the extended primary Earth, became young Earth, and the torn-off parts of a mantle became the Moon and Mars. Places of the mantle fragments' tear off from the central Earth became places of young Earth's growth continents. Solution of the continents' problem origin is a key to understanding of the Earth origin, as well as the Moon and Mars.

Keywords: Proto-Earth, plasma clot, explosion division, young Earth, Moon, Mars

1. INTRODUCTION

1.1. Two wrong dogmas in Astronomy and Geology about origin Earth and continents

To the XXI century the astronomical science achieved grandiose success in studying of stars, galactics and Universe, but concerning an origin of planets, in particular the Earth, it 'marks time'. Two large wrong dogmas are the reason of it: one in astronomy,

concerning of the Earth origin, another in geology, concerning formation of earth crust, in particular – continental crust. These dogmas considerably confused a real picture of the Earth global tectonics formation and slowed down development of sciences about Earth.

1.2. Wrong dogma in astronomy

From the XX century middle and to the present time in Russian astronomy the so-called concept of 'cold Earth' dominates. It was known earlier, in the 18th century (Suetinskay, 1956) but a like working hypothesis was offered in 1944, in Russia, by the physicist O. YU. Schmidt. However the followers accepted it as the official concept and continue to support it so far. According to this concept, mother Earth was formed in a cold cloud of a small cold particles, their adhesion in larger particles – planetesimals, hundreds kilometers in size in the diameter, and then – due to impact and adhesion of the last. Besides according to this hypothesis the cold cloud was taken by the Sun incidentally. Now this concept is considered within the so-called 'standard scenario' of a planet formation (Fisher, 1990; Vetyazev et al. 1990; Adushkin et al. 2007; Yasev, 2008). For example: in the large paper is noted:" young Earth occurred due to homogeneous accretion of a cold proto-planetary gas-and-dust cloud and there was a cold and passive planet during 600 million years, i.e. during all Hadean" (Sorohtin et al. 2004, p. 9). And also:" now almost unanimously admits that…planet formation Earth by accretion of the particles which have made it – planetesimaly – had to proceed very quickly, during several tens millions years…The Earth already in the course of accretion had to warmed significally owing to impact composing it planetesimals (Hain, Lomize, 2005, p. 498).

This concept is based on accidental event, contains a number of large miscalculations and shortcomings (Clark et al. 1975; Shilo, 1997) and considered now as obviously absurd what with consists in it many physics impossible processes (Neiman, 1969; Shilo, 1999; Kuznetsov, 2006; Yasev, 2008): 'at a modern level of development of science it is impossible to reduce everything to mechanical association of particles as it is made in an accretion hypothesis, process of evolution of stars and planets is process of their deep internal reorganization' (Neiman, 1969, p. 27). The astronomer I. Shklovsky spoke more precisely: 'each important event in the Universe is connected with nuclear processes' (Surdin et al. 2007, p. 26). Progressive hypotheses of initially hot plasma condition of Earth, developed by the astronomer-academician V.G. Fesenkov in 1944 and later hypotheses of this direction (Clark et al. 1975; Larin, 1975; Voitkevich, 1988; Shilo, 1997; Shilo. 1999; Kompanichenko, 2005) didn't consider geological features of the Earth's continents and a factor of nuclear evolution of stars and planets, that didn't allow to create objective model of an origin of planets.

1.3. Wrong dogma in Geology

By the XXI century beginning in geological science the hypothesis of the plate-tectonics, offered in 1962-1966 and based on five assumptions of oceanic earth crust's formation. Some active followers of this hypothesis even began to call it the theory, besides final and uncontested. However many known geologists never recognized this hypothesis and gave it a negative assessment: 'the hobby for ideas of a neomobilizm in a hypothesis of plate tectonics became for a long time a brake in development of sciences about Earth' (Orlenok, 2010, p. 28). About insolvency of a hypothesis it is published much (Carey, 1991; Kuznetsov, 2006; Vasiliev, 2009; and others). It is possible to add only that this hypothesis is developed generally by geophysicists – seismologists and isn't a geological hypothesis as the main planetary geological element – Earth continents, dropped out of its basis. Respectively, the leading fact of Earth's evolution–irreversibility of geological development of the Earth crust dropped out of it, as well as the major stage – an astronomical stage of origin and planet evolution (Vasiliiev, 2009; Kuprin, 2010; Blyuman, 2011; Zhirnov, 2013). Long "buoyancy" of this hypothesis was promoted only by absence of new data in astronomy and geology. However this shortcoming is significantly filled till now.

2. SCOPE OF THE STUDY

The aim of carrying out this research is to establish peculiarities evolution of the Earth. This task can be solved only on the basis of synthesis of known and new data of many sciences - geography, geochemistry, geology, geophysics, astronomy, astrophysics, dynamics of Earth and nuclear processes in it, mathematics. Evolution of the continents - planetary geological structures is one of key factors in the solution of this problem. The power trend of their evolution decreasing in time, with the most powerful period at the beginning of formation in Hadean, directly brings to events of evolution of Earth in space at an astronomical stage. This theme is researching many scientists during very long time but without calculation features of the continents' evolution, as a rule. But many new data appeared now give the chance to specify significantly existing representations on this matter and to offer the new conception.

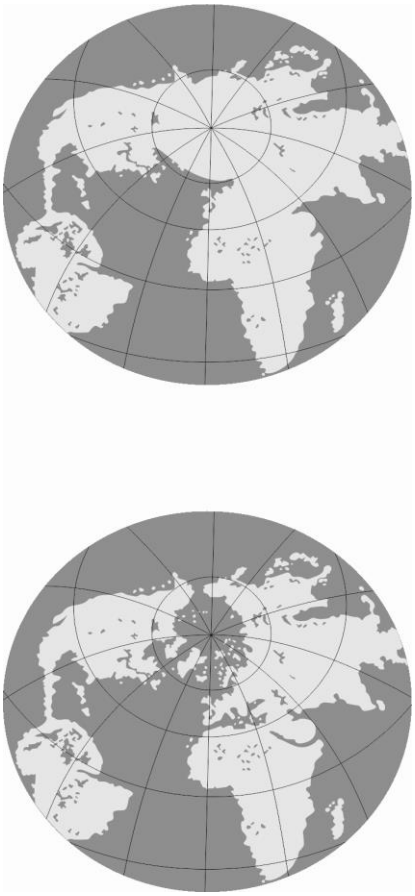

Figure 1

Position of the Northern continent of Earth: top – till Mesozoic time, a bottom – now, with the deflection which has arisen in the center filled with water of the Arctic Ocean (Atlas of the World..., 1984; Zhirnov, 2014)

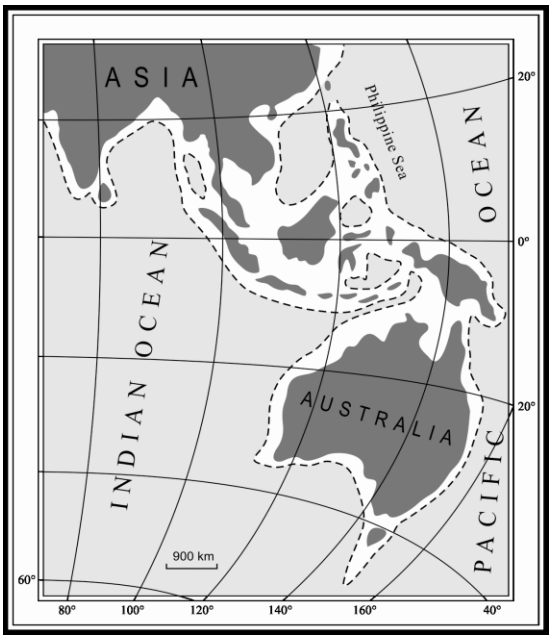

Figure 2

The Indonesian continental arch with islands and the continental shelf covered with small water of the ocean. It is the made narrower part of the Asian continent connecting directly to Australia (Atlas of the World..., 1984)

2.1. Materials

The materials used include the author's papers on the theme, synthesis and critical analyses of the published materials on many sciences: geography, geology, geochemistry, geophysics, astronomy, astrophysics, mathematics, dynamics of nucleus processes of the stars and the Earth core.

2.2. Methodology

For solution of the problem were used established regularities of the continents' evolution, the new data of the geographic and geological maps and the new data of many sciences about Earth.

3. RESULTS

3.1. Geographic regularities of the position and structure of the continents

For the first time the English philosopher Francis Bacon paid attention to geographical regularities in a structure of continents of Earth: "we shouldn't forget that in the structure of the world – in its most parts – it is impossible to neglect similarity examples. Africa and the Peruvian area with the continent stretching to the Strait of Magellan are that. Because both that and other area have similar isthmuses and capes, and it isn't casual. Also, New and Old World. They are extending to the North, but to the South are narrowed and pointed" (Sholpo, 1986, p. 44). The large English geologist Charles Lyell had noted: "at the real distribution, the sphere terrestrial can be divided into two equal parts so one hemisphere will be almost absolutely covered with water, and on other there is less water, than land, and that it is even more surprising … than the earth in the northern hemisphere treat the same lands in southern, as thirteen one" (Sholpo, 1986, p. 46). In 1892, A. Humboldt, a well-known traveller, found that the regularities of mountain ridges were found mainly along the longitude and latitude directions. M. Bertran, a geologist, supported this (Sholpo, 1986). Reclus, a great geographer and traveller, generalized the special geographical features of the Earth: 1) the northern continent hemisphere and the southern oceanic, 2) the triangular forms of all continents that narrowed to the south, and 3) the bending of the southern ends of the continents to the east, especially the large bend near the south-eastern part of Asia (Sholpo, 1986). The great chain of islands in this region bends to the south-east along the latitude direction. It is now established that continents it is much more by the sizes concerning their body towering over level of the World Ocean, in fact make about 50% of Earth surface. But their borders parts were covered with water of recently arisen World Ocean, in the Mesozoic Cenozoic (Belousov, 1975; Serpuhov et al. 1976; Orlenok, 2010).

Moreover, the northern part of the American and Europe-Asian is a part of uniform megacontinent (Figure 1) that was covered recently with water of the young Arctic Ocean (Belousov, 1975; Serpuhov et al. 1976; Shipilov et. al. 2009). American continent is crossing almost all Earth globe from North to South. As well southeast, island, the part of Euro - Asian continent connects own shelf (shallow water area) to a shelf of the Australian continent. Thus Australian continent is the part of the Euro - Asian continent (Figure 2). On the other hand, Southern American continent almost connected with Antarctic continent, and their common edges are strongly bending to the East (Figure 3). Therefore, on Earth there are only two continents. Northern - very large continent with three southern continental 'rays': Southern American, African and Australian, and southern - very small continent so-called Antarctic continent (Zhirnov, 2014). However until recently time mistakenly was considered that on Earth there are many different continents.

3.2. Geological, geochemical and geophysical peculiarities of the continents

The continents sharply differ from the bottom of modern oceans on geological structure. Continents are presented powerful crust (30-45 km on the average) that formed during 4.4 billion years. Main, two-layer, the part of this crust (80%), called by the crystal base, was created at the beginning of geological development of Earth. The bottom layer is presented by basalts – smelting of an ultrabazitovy cloak of huge power (10-30 km), later turned into a metamorphic granulite-basalt layer. This layer was formed inside 4.4 - 4.0 Ga ago (Pavlovskiy, 1975; Serpuhov et al. 1976). The top layer of the base, thickness 5-20 km, has another, granito-gneissic (sial), structure. Upper layer was formed 4.0-1.7 billion years ago. In the subsequent geological time round sites of the ancient base mobile folded belts were forming, and separate blocks of breeds in the base were lowered by 2-5 km and covered with a horizontal layer of sedimentary breeds. This top sedimentary layer has also significantly aluminium – siliceous (sial) composition (Belousov, 1975; Zlobin, 2006). Earth territories under the modern oceans, making about 50% of all it surface, have other structure and a development trend. Thickness of this "oceanic" crust makes up only 5 km and it is presented by primary peridotite mantle. This crust was formed at the same time with the bottom layer of continents, 4.4 - 4.0 billion years ago. But it quietly hardened (when cooling planet) and remained invariable land almost all subsequent time. Only 150 - 10 million years ago (Mesozoic Cenozoic) these territories were lowered on depth of 4 - 5 km. At the same time primary peridotite crust was covered with a layer of young basalts with power up to 1-2 km and arisen at this time oceanic water (Figure 3). Then basalts were covered a thing layer (100-500m) friable sedimentary rocks (Belousov, 1975; Khain, Lomize, 2005; Blyuman, 2011). As showed one author: "only on pre-geological stage Earth was uniform. But already at its end... pre-oceanic and pre-continental areas stood apart. Primary early thin basalt crust only in the Triassic started being built on by the magmatic and then sedimentary cover. Base oceanic crust was as a result formed. In pre-continental areas already to early Proterozoic was created 80% of volume modern continental crust" (Shlezinger, 2003, p. 87). Thus, continents of Earth represent the largest geological and geochemical anomalies arisen on a body of a planet from the very beginning of its geological development and developing so far (Zhirnov, 2005; Zhirnov, 2011; Zhirnov, 2014).

Figure 3

The American Continent sharply being bent in the south to the east and connecting to a similar bend of the Antarctic (Southern) continent (Atlas of the World..., 1982)

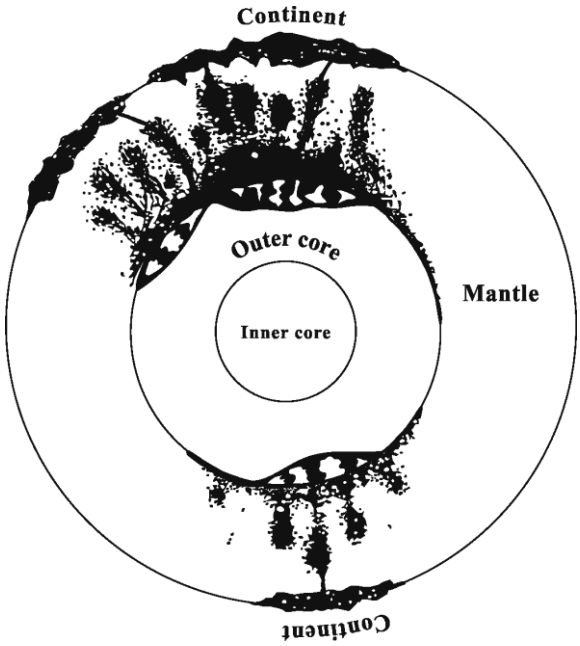

Figure 4

Model formation of the Earth's continents - at the expense of nuclear fluids from an external (liquid) core of Earth. On a surface of a core deflections due to out flow of nuclear substance to the bottom of continents were formed. Taking into account data (Khain et al. 2005; Zhirnov, 2014)

3.3. Power trend of development of continents in time

As it is well known now, continental crust was formed under cyclic influence of the nuclear gas pulsations (fluids) arriving from a liquid core of Earth, caused its specific structure and big power (Letnikov, 2001; Marakushev et. al. 2005). During all geological history nuclear fluids arrived strictly selectively – to a sole of modern oceans on vertical channels from a core (Figure 4) that testifies to destruction and continuous excitement of only certain sites of a core. So on the surface of outer core appeared the large

depressions because of substance reduction in these parts of a core (Figure 5). Thus, gas pulsations were the most powerful and mass at the very beginning of a geological history of Earth, after end of an astronomical stage of its evolution (Salop, 1982; Voitkevich, 1988; Khain, Lomize, 2005). Therefore, such selective transformation of a face of a planet was caused by any factors which have arisen at an astronomical stage of evolution of a planet. However with what?

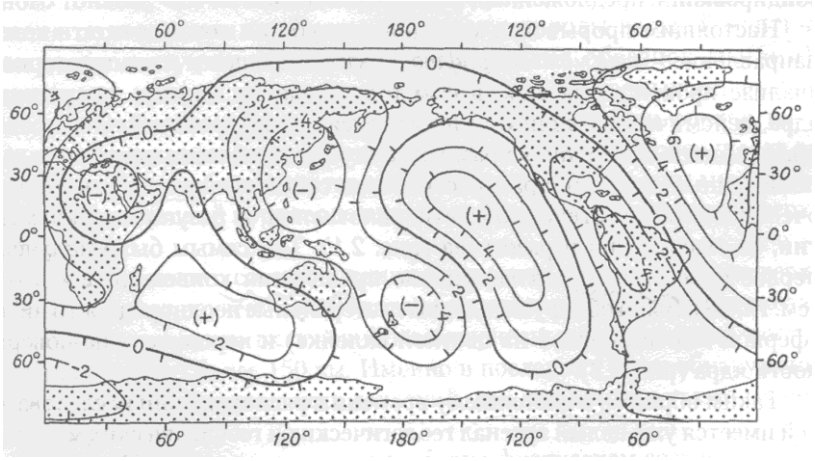

Figure 5

Surface of the Earth's an External (Liquid) core, according to a geophysical seismic-tomografic inspection. Deflections of a core are under continents. On A. Morelli et al. (1987), out of (Khain et al. 2005)

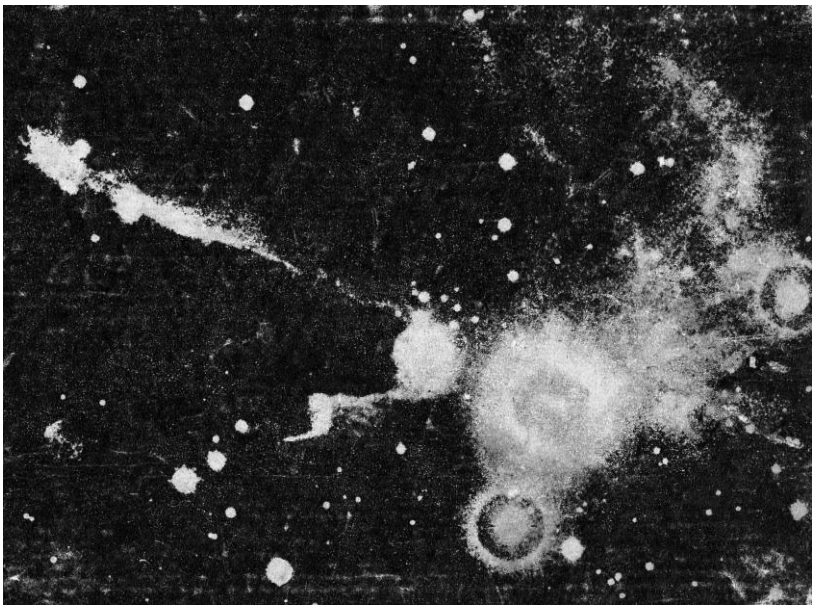

Figure 6

The newborn group four stars - in the right lower part of drawing. One star, in a big indistinct gas cloud, just is born; two others (to the South and to North-East from it) - in an environment of thin gas rings, were already issued; and the 4th star, to the west of the first, powerfully throws out from itself two portions of plasma – since northern and southern its ends (Vorontsov – Velyaminov, 1966).

3.4. Astronomical stage of the Earth evolution

It is well known now that all important events in star and planetary systems are caused by nuclear processes in a core of stars and planets (Ambartsumyan, 1988; Surdin, 2007): "the main way of development of stars – explosive, i.e. always occurs explosion of the stars, being accompanied ejection of big mass of a matter" (Ambartsymyan,1988, p 19). Young stars, usually massive, with a high speed of rotation – to 150-400 km/sec. (at the modern Sun – 2 km/sec.) and very unstable in the dynamic plan. As a rule, they break up (are divided) into double and multiple stars, respectively, with loss of speed of rotation (Ringwood, 1982; Abalakin, Sochilina, 1984; Levitan, 2006). Planetary systems are formed with a small mass of star's (to 10% of volume) thrown-out in cosmos (Abalakin et. al. 1984). Model of this event is shown on (Figure 6). Thus, the initial condition of Proto-Earth is a quickly rotating clot of the heated plasma (with a temperature of millions degrees and a powerful magnetic field), thrown out of the young Sun. The main mass of substance in a rotating clot concentrates, as usual, in its core (Shilo, 1997). Further development of a spherical clot in cold space happens against consecutive cooling and transition of its easy gas cover in liquid, then – is liquid - a viscous state. However completeness of development of process of evolution of a young proto-planet depends first of all on the mass of the clot of plasma thrown out from young Sun. With a small mass of the thrown-out substance, process of cooling and its consolidation proceeds quickly (Voitkevich, 1979), passing a stage of initial development (an example – Mercury planet). Mother Earth possesses the large central gas and liquid core. So process of it core differentiation proceeds already more than 4 billion years. Transition to a liquid state inevitably conducts to change of a spherical form of a clot - to extended, like cigar and pear-shaped form that is proved mathematically by A. Poincare (Surdin, 2004) and A.M. Lyapunov (Suetinskay, 1956).

The heavy gas core with a large number of "explosive mixture" from hydrogen, oxygen, nitrogen, carbon and other gases gets the complicated a form and extremely unstable situation, in a pear-shaped body. Similar complicated form of a core discovered in some hardened space bodies, for example in Galley's come (Figure 7). In core is consisted huge amount of H, C, N, O and other gas elements, which are explosives mixture of great power. Besides the large add power is forming under transition matter of core from gas to liquid condition (Karnaukhov, 2000). Therefore at the slightest change of speed and pressure in different parts of a body that is characteristic for such conditions (Karnaukhov, 2000; Surdin, 2004) there is a nuclear explosion and thrown away in space of separate parts of this body (Gorbatsky, 1967). In particular, from Proto-Earth were thrown out in space mantle fragments from the

northern and southern ends – opposite to sites of a core where the powerful directed explosions took place (Figure 8). The central body which has remained after explosive disintegration became a planet Earth in its initially primary state (Figure 7). Destructive parts of young Earth became those places on which were created continents then. The nuclear pulsation fluids thrown out from the core have been selectively directed to sites of mantle destruction on a surface of a planet during 4.0 billion years (Figure 4). The revolutionary discoveries in astronomy during 10-15 last years - the discovery more 400 large hot planets similar Jupiter or Proto-Earth (and also some planets similar our contemporary Earth) are convincing arguments of the real Proto-Earth that existed 4.4 Ga ago (Marakushev et. al. 2005; Surdin, 2007). As well as the Meteorite's belt presence between Mars and Jupiter's planet is proof of planets evolution way's interrupting by explosive events (Serpuhov. et. al. 1976; Marakushev et. al. 2005). There are additional signs of the planet's explosion disintegration – in meteorites. For example: presence in meteorites some specific minerals and inclusions: diamonds, muassanits with a large number of fluid inclusions that are characterized for over high temperatures and pressure in the condition of explosion planets (Marakushev et. al. 2007).

Figure 7
The Pear-shaped form of the Galley's comet and the hardened core in it (Levitan, 2006).

3.5. Mathematical data of the Proto-Earth division

Rotation whirl, with developed turbulent structure and sharp differences of temperatures and pressure is the most widespread in Universe (Abalakin et al.1984; Latkin et al. 2007). It is the most difficult for application of mathematical methods of research. Nevertheless, on the basis of use of the equation of Navie–Stoks and the accounting of some parameters of vortex structures (a speed vector, viscosity of the environment and pressure gradients). It was succeeded to receive the approximate mathematical decision for star formation with planetary system. It is shown that "at achievement of mass of a star is higher than the critical process of thermonuclear synthesis begins, and emission of excess weight in space allows to forming planets and their satellites" (Latkin, Shilo, 2007, p.186). Now it is received mathematical expression for cosmos-geochemistry criterion of a break-up of Proto-Planet (Ferronsky et. al. 2006) and separations of satellites from it (mantle fragments): $m\ \mu 2 = b = const$, where, m – the critical mass of the Proto-Planet body, in a bifurcation point, μ - average value of molecular weight, b - a constant considering distribution of density and an average chemical composition of the Proto-Planet body (at a stage of equality of forces of gravitational and Coulomb interaction). At achievement of the Proto-Planet point of bifurcation from it there will be a separation of fragments of a mantle under the influence of nucleus forces in the center of a gas and liquid core of Proto-Planet (Ferronsky et al. 2006). The most possible version of Moon origin, by the way separating from the Proto-Earth, from forth version examined, was proved known American mathematicians H. Urey, J. O'Keefe and others in 1977 (Vasiliev, 2009).

3.6. Peculiarities of the Proto-Earth disintegration

As a result of nuclear explosion in Proto-Earth large fragments of a mantle began to come off it. Judging by character of coming-off fragments of a mantle the condition of a mantle cover Proto-Planet was liquid - viscous, pasty. In connection with the difficult, pear-shaped, Proto form - planets and, respectively, in connection with a difficult form of a gas and liquid core in it, nuclear and explosive forces in its core were directed in two directions. The main impulse fell on northern wide part of a planet, up from a pole and it is a little towards in east side of the East, according to the provision of a body of a core in a planet (Figure 8a, b).

The separation of a northern large fragment of a mantle began with the party modern North American the continent, with its West side. The separation occurred consistently and is directed from the West to the East, according to planet rotation. After a separation of northern subpolar area, the wide separation of the North American fragment began with North side. In process of its leaving in space and planet rotations from the West to the east, the lower part of a fragment became to be narrowed and to be bent to the East that is fixed in the modern provision of the Meksikano-Kubinsky subwidth bend.

Table 1

Comparative size table of Earth, Mars, Moon (Habbard, 1987; Levitan, 2006; Orlenok, 2010)

Planet	Mass, кg	% from mass Earth	Gravity g/см^3	Radius of planet	Diameter of core, км
Earth	6x10^{24}	1	5.5	6371	3470
Mars		0,11	3.94	3397	677
Moon		0,0125	3.34	1740	347

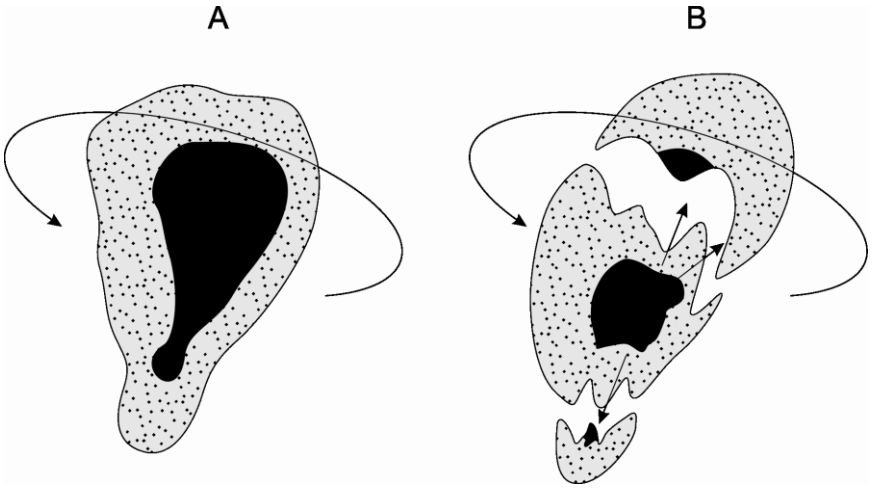

Figure 8

Pear-shaped Proto-Earth form and its gas core (A). Nuclear -explosive disintegration of Proto-Earth with throw out in space of its northern and southern ends (B). Taking into account data (Levitan, 2006; Zhirnov, 2007)

After the separation of the North American fragment was followed by a separation of wide part of the Southern American fragment of a mantle. In process of its leaving in space, the bottom end of a fragment became narrower also it was sharply bent to the East, according to planet rotation. At last, the largest fragment of a mantle – Euro-Asian also came off in the beginning from the West to the East. And its lower narrower southeast part made narrower and strongly bent to the East (now represented by the Indonesian's island chain), and then in end the large Australian fragment of a mantle was torn off. And all northern fragments of a mantle, with its southern narrowed ends went to space. Much more simply affair with the southern Antarctic fragment of a mantle was. It was thrown out directly to the south, but, owing to rotation of a planet, its the last, made narrower, the end was sharply bent to the East and almost connected to east bend of the Southern American fragment of a mantle. Remained on a planet place Earth from which mantle fragments were pulled out and thrown out in space, were similar in a form gone to space, and there were places of origin of future continents. As it was shown above, the thickness layers of basalts were created on these broke sites of a Planet under acting powerfully nuclear oxygen - the hydrogen fluids which have caused smelting from a mantle, for 400 million years. Later, a powerful granite-gneissic layer of continental crust was had created in the Archean by acting the silicon-oxygen-aluminum-hydrogen fluids of a core. Thus places of parts' separation mantle from Proto-Earth became the places of formation (growths) of the Earth's future continents.

3.7. Origin Mars and Moon

And what happened to the fragments of the mantle which have been thrown out from Proto-Earth in space? Before considering this question, it is necessary to show a ratio of parameters of studied objects (Table 1). If on weight Mars makes only the tenth part of Earth, on volume it is equal about a half of volume of Earth. It is caused by its smaller density. Sharply various diameters at core of planets has huge value for safety in larger core of primary nuclear energy and, respectively, for duration of evolution of planets. T he largest fragment of the mantle which has been thrown out by the most powerful explosion from the northern end of Proto-Earth (equal about a half of its mantle), moved away on long distance from remained young Earth and became its satellite, partly. Proofs of it:

1) the period of rotation of Mars, equal 24 hours 37 minutes, almost coincides with the period of rotation of Earth, - 23 hours 56 minutes (Levitan, 2006);
2) The axis of Mars is inclined to the orbit plane at an angle 67°, the axis of Earth is inclined to the orbit plane at an angle 66,5° (Voitkevich, 1988; Levitan, 2006);
3) The orbits of Earth and Mars are in one plane almost: the angle between them very small - 2° (Surdin, 2007, p. 61);
4) An orbit of Mars concerning Earth elliptic and strongly extended: its distance from Earth changes from 56 till 101 million km (Surdin, 2007);

5) The Mars gravity is 3.94 g/ cm ^{3} as well as gravity of Earth's middle mantle (Volkov, Surdin, 2001);
6) The planetary geological structures of the Mars similar those of an Earth. In particular, there are two long longitude structures - troughs on the Mars on sides the greatest Tharsis arc. Besides, there is gigantic Mariner's system of the rifts that have latitude direction near equator (Kats et al. 1984, Kuzmin, Galkin, 1989; Zlobin, 2006). It similar Amasonka-Niger the greatest latitude system rifts, depressions and gravity anomalies of the Earth that are crossing Atlantic ocean, South America and a half of Pacific Ocean nearly equator (Hain,1964; Kocygin,1988). But the geological development of the Mars was very brief and was finished near 2.5-3.0 Ga ago (later then on Moon) – after stage of smelting basalts cover from mantle that was finished to the end of Hadean time;
7) Detection on Mars many large dry valleys of the rivers were important. On Earth they appeared for the first time in the Devonian time and on bottom of the Atlantic Ocean's northern part there are a large net of the Paleozoic's river canals (Serpuhov et al. 1976). It can testify to completion of some volcanic processes and appearance power water streams on Mars in Archean time apparently, because geological processes on small Mars were finished more rapidly then on the Earth.

But on that time Mars was at a short distance from Earth and Sun, climate was warm and water didn't freeze, as now. Actually, Mars was initially the far moved away satellite of the Earth which can't leave from it in space and on distance 56 million kilometers from Earth it became common sputnik for Sun and planet Earth. Mars consists near 17% of iron but in the core nearly 5% from it mass. The other iron is in mantle which is more gravity then mantle of Earth (Voitkevich, 1988). The content of iron (Fe_2O_3) in rocks of Mars is 18%, silicon dioxide–13-15%. Therefore rocks on surface of a planet consists more iron and have red coloring. These rocks similar earth basalts in oceanic crust. The geological development of Mars was finished apparently in Archean time because there were few gas fluids in it small core (Orlenok, 2010). The Moon is the close satellite of young Earth which has been formed from the mantle's fragment thrown out in space from the southern part of Proto-Earth. The velocity of thrown out mantle fragment was a little so it come off on circle orbit. The Moon gravity is 3.3 g/ cm ^{3} as well as gravity of upper mantle of Earth. Angle inclination it orbit to plane ecliptic only 5,1^o, that much less then inclination of the Earth (Levitan, 2006). This position it was initially when it was else lower edge of the Proto–Earth. Separated part mantle so-called Moon became come off from young Earth very slowly and, on value of American astronomer D. Macdonald, Moon will be moved away on 12.5 radius of Earth else and then in future it will be on constant orbit relatively Sun and Earth (Abalakin et al. 1984). The geological development of the Moon was very brief on reason very small liquid core and fluids in it (Marakushev et. al. 2005; Orlenok, 2010). On lunar continents it was finished near 4.5- 4.0 Ga ago, mountain rocks within basalt depressions younger – 3.1 – 3.95 Ga (Habbard, 1987; Zlobin, 2006; Orlenok, 2010). The Moon as well as the Earth and Mars had asymmetrical structure: on it surface are established large depressions that covered the layer basalts similar earth basalts from oceanic crust and mountain areas that consist from anorthosite rock. Many researchers believe that the Moon and Earth arose from one substance. Concentrations of the main elements of terrestrial planets (Mg, Al, Ca, Si, and also Ni and Co) are close, but content of flying elements in the Moon's mantle (K, Na, Cl) is very few (Hubbard, 1987). The middle isotop relation O^{18}/O^{16} for basalts of the Moon (+5.6 - +6.2), and for basalts of Earth (equal +5.9) is very close. For terrestrial and lunar basalts close relation is characterized only for following couples elements Ti / Pb, Ti / Cs, K/U, Cs/U. But in rocks of the Moon is established deficiency of precious metals (Shilo, 1997).

4. DISCUSSION

The provided data on evolution heated plasma Proto - Earth and origin of continents of young Earth on sites of a separation of fragments of a mantle from it, unambiguously testify to nuclear and explosive disintegration of Proto-Earth Formation of the Moon by separating from Proto-Earth was assumed by many scientists (Darwin,1880; Pickering, 1907; and others). At the first time, in 1880, the English scientific-astronomer D. Darwin expressed an opinion of origin of Earth's satellite Moon of the means of separating Moon from Earth in the way Sun's high tide influence. Then W. Pickering (1907) had proved his version as a scientific hypothesis. Later this hypothesis was supported by R. Shtaub (1938). In period 1966-1977 O'Keefe J. was researched it more essentially, as well as D. Wise (Ringwood, 1982). But some doubted it because of smaller amount of flying gases on the Moon, than on Earth and, on the contrary, the bigger contents on the Moon of refractory elements - (Galimov, 2006). However such doubts aren't reasonable. The maintenance of flying elements on the Moon has to be naturally lower, than on Earth, as a gravitational attraction on the Moon in 6 times less, than on Earth and flying left it in space. The raised maintenance of heavy elements in a mantle of the Moon also naturally. The Earth's mantle contained the increased quantity of such elements 4.0 billion years ago that confirms existence them on the Moon which also hardened 4 billion years ago. But mother Earth developed after that 4 billion more years, so far. It is natural that heavy elements fell to Earth's mantles during this time deeply, is closer to its core. It is necessary to consider also that distribution of elements to surfaces of Earth and to its depth the very uneven. Rocks on the Moon and Mars are investigated while only in single

points and to speak about a gross chemical composition of these planets satellites of Earth it is premature still. As a whole geochemical features of the Moon, Mars, Earth rather similar: "geochemistry data definitely demand in order to Moon would to share from the mantle of Earth some method after forming of core it. It is the incomprehensible question only is staying – about mechanism of separating Moon" (Ringwood, 1982, p. 258). Now we know the mechanism of Earth's origin, the places of Earth where the large mantle's parts had been thrown away before, and the main cause of the Earth, Moon, Mars and Earth Continents' birth and evolution.

5. CONCLUSION

The provided data consistently testify to an initial plasma condition of Proto-Earth and its inevitable nuclear and explosive disintegration at the end of an astronomical stage of its evolution, with a separation of large parts of a mantle from the Proto-Earth's like pear body. The central body which has remained after disintegration became young Earth, and the torn-off fragments of a mantle became satellites of Earth – the Moon and Mars. Places of a separation of fragments of a mantle on a surface of young Earth became places of the subsequent long formation of continents of Earth.

SUMMARY OF RESEARCH

1. The reason of an origin of continents is as well the reason to understanding of an origin of a planet Earth and its first satellites – the Moon and Mars. There are two continents on our Earth initially: huge Northern with three large southern branches (ends) - American, African and Indonesian-Australian, and small southern, Antarctic, the continent. It is characteristic feature that all southern ends of the northern continent are narrowed to the South and sharply bent to the East, in the direction of planet rotation. Also it is bent and the made narrower end of the Southern continent.
2. Continents of Earth are characterized by specific oxygen-aluminum-silicon (sial) composition of crust, long geological development (since the Hadean) of the crust, the directed power trend of receipt in crust of nuclear fluids – maximum in the Hadean - Archean and minimum in the Cenozoic and broad development of folded forms of sedimentary and metamorphic rocks.
3. Basalt-peridotite crust in the bottom of modern oceans (excepting Northern), on the contrary, always remained passive land (4 billion years) and only in the Mesozoic Cenozoic underwent graben-block lowering on big depths in waters of the arisen World Ocean. It is characterized by the horizontal provision of the bottom of oceans and a cover of young basalts covering it and a friable precipitation, lack of folded deformations of rocks and the granite layer of rocks inherent in continents.
4. Continents initially began to be formed on sites of a separation of large fragments mantle from Proto-Earth. They are the peculiar scars, the healed large wounds on a surface of young Earth, on sites of the pulled-out fragments of a mantle.
5. Evolution of Proto-Earth was made from a rotation hot plasma clot which has been thrown out from the young Sun in cold space, to the extended, similar pear body with a viscous mantle and with dynamically extremely unstable gas core of a difficult like pear form. The inevitable natural final of such evolution - nuclear and explosive disintegration of Proto-Earth with emission in space of a mantle trailer fragments.
6. The largest fragment of the mantle which has been powerfully thrown out from the northern end of Proto-Earth became Mars – the distant satellite of young Earth transformed at far distance (56 million km) in the satellite of the Sun with strongly elliptic orbit of rotation concerning the Sun and Earth. Southern fragment of Proto- Earth mantle separated with a small speed that predetermined its rotation on a circular orbit and slow removal from Earth. Through 1 billion years the Moon will move away from Earth on stable (concerning the Sun and Earth) the orbit equal 72.5 radiuses of Earth.

FUTURE ISSUES

I believe that many scientists in sphere of sciences about Earth have to pay attention to the real geology-geophysical and astronomical data obtained for last 50 years and summarized a little in this work. Apparently, ripened time to refuse in geology and astronomy from any assumptions and hypothesis existing now and to begin the broad scientific research the processes of the Earth's core nucleus dynamics on astronomy stage and the processes of the geodynamics formation early continental earth crust.

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