

**Z. Kheladze, Zv. Kheladze**

**What a wonderful purpose it might have been created the universe and what the mysterious mission appeared the human in this universe.**

**(Tbilisi, Georgia)**

**“Critical Care & Catastrophe Medicine”, Tbilisi, Georgia, 2015, N15**

The universe should have been created by the Big Bang of the energy in critical condition and its function might entail safely storing this energy like an “accumulator unit”. The human being, apart from being the “observer” of the universe and “transformer” of its energy, might also be playing the role of the “library” of the information.

**Key words:** wonderful purpose, created, the universe, mysterious mission, appeared the human.

It's interesting, that E. Kant's theory on perpetuity, permanency and infinity of the universe was widespread in the twentieth century, which he elaborated based on the E. Newton's laws of physics. The scientific authority of Kant was so great that this model of the universe was accepted without any criticism, not paying attention to the fact that according to this theory the light emanated from the stars should have lighted the sky during the night. The credibility of Kant should have influenced even a person with such intellectual capacities as A. Einstein. However, the calculations conducted during the research of his relativity theory contradicted the above model. Hence, Einstein had to admit that the universe is changing, but he also paid tribute to Kant and noted that the universe is still static. It is



The universe

constantly influenced by the expansive forces that are balanced by simultaneously emerging gravitation “cosmic constant” might ” that is predominant in the cosmos. Later on, the Russian G. Friedman forces. To embrace these forces Einstein had to introduce the “cosmic constant”, which he rejected at a later stage. However, further developments showed that A. Einstein was somewhat correct and he elaborated the model of non-static universe and supposed that the universe was created through an explosion. Notably, the possibility of creating the universe through the explosion was supposed in 14<sup>th</sup> century by only one person, who was an adept of Kabbala – Yitzchak Luria. In his Treatise known under the title “Breaking vessels” he noted that the universe was created by the explosion in the cosmos that occurred due to a mistake. We have to recall that even the experiments on the big collider are not exempt from such mistakes and under the high temperature the collision of elementary particles moving on high speed can transform into unmanageable process due to the chain reaction, which might involve all the



A. Einstein



G. Friedman

elementary particles of the universe and thus cause its end. Interestingly, the best scientific rendition of the Big Bang theory belongs to E. Hubble, who showed through experiments conducted using telescope that the intensity of the red light is increasing the further the distance of the galaxies from the Earth. The main adherent to this theory was the Belgian theologian George le Maître, later the president of the Pope's Academy, who published his work "Non-static universe". Though the term - "the Big Bang" was introduced by O. Hoil, who was opposing to this theory. The big role in identifying validity of the Big Bang was played by the Russian G. Gamow, who defected to the USA. He was the first to suppose the

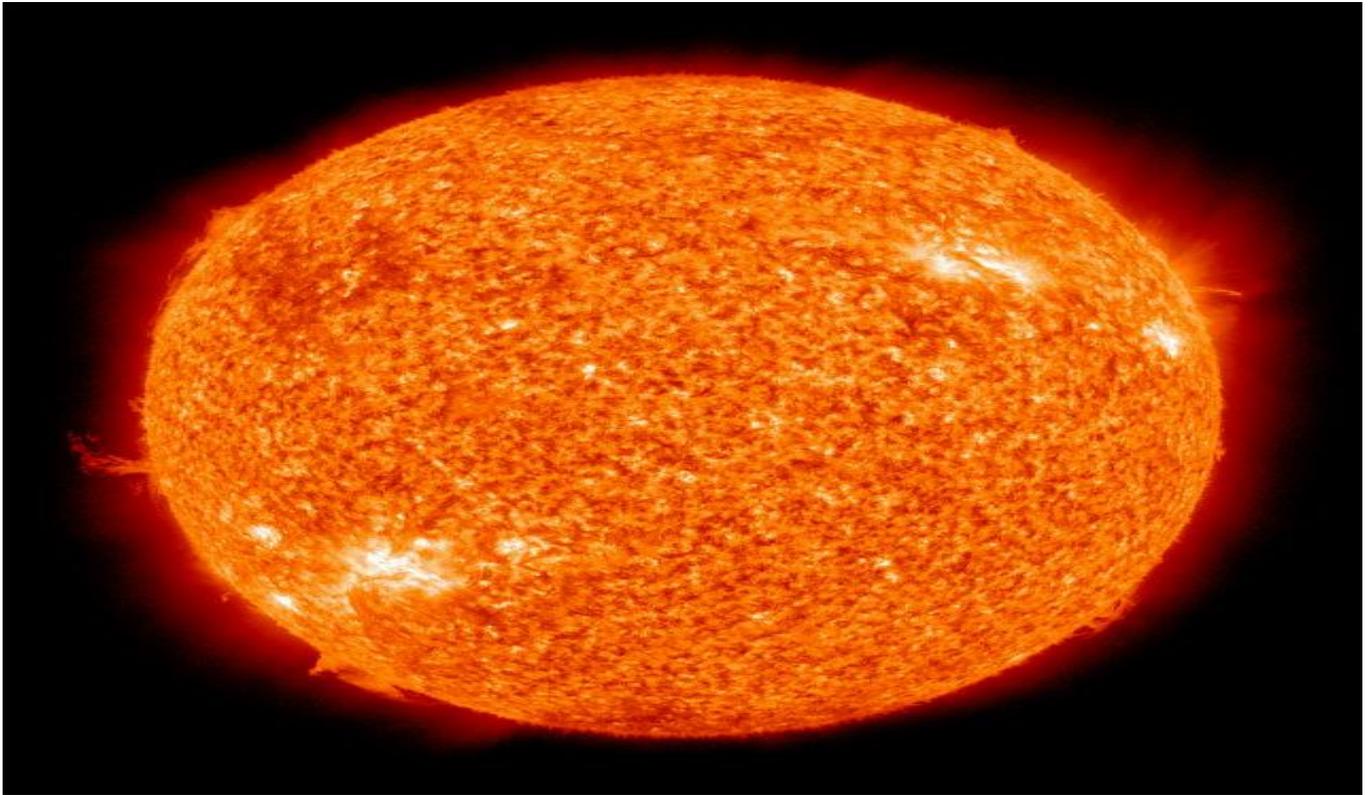


I. Iurina

"hot his explosion" and substantiated the gradual decrease of the temperature during the process of creation of the universe in his works published under the title "Hot universe". The discovery of background radiation by A. Penzias and R. Wilson, which we are witnessing on a daily basis while watching the TV, greatly contributed to the recognition of this theory. Defining the deposits of hydrogen and helium, the results of the experiments on the big androgenic collider, and other facts were also important in this respect. It is supposed, that 13,7.10.9 years ago an unknown spherical formation of tiniest size of  $10^{-35}$ cm and  $10.95$ g/cm<sup>3</sup> density discovered in the so called "singular environment" should have exploded; the temperature during the explosion should have been equal to 10.32 kelvin.

It's noteworthy, that between  $10^{-35}$  seconds of the Big Bang, that corresponds to  $10^{-43}$  sec of "Plank's time" and  $10^{-45}$  sec of the same time dimension, the exponential expansion of the universe occurred which was termed a cosmologic inflation by the American S. Coleman. The dimensions of the universe expanded 10.50 times during this interval. By that time, the temperature that developed during the Big Bang fell up to 10.6 kelvin, gravitation detached from the explosion forces and formed as a matter in the form of the plasma. At  $10^{-53}$  sec and 10.5 kelvin temperature the strong and weak nuclear forces separated. At  $10^{-58}$ sec and 10.4 kelvin temperature the protons and neutrons formed the nucleuses of hydrogen and helium. Since the 3<sup>rd</sup> minute from the explosion during 300000-880000 years, when the temperature fell to 3.10.3 kelvin, the electrons bound the atom nucleus and conditioned creation of substance. At the same stage, the electrons could not "hold" photons any longer causing the stars to twinkle and illuminated the universe. Supposedly, this is the relict light that is sent to the Orthodox Christians every Easter and that, presumably, reaches the Earth through quantum porting. The hydrogen and helium, that were formed in the early stage of the Big Bang overtime created the cosmic dust and clouds, which, under the influence of the gravitation forces and other factors formed the universal hierarchy of satellites, planets, stars, galaxies, clusters and other components It's noteworthy, that there

are other theories of the universe's creation, but none of them answer the questions why was the universe created and what role is the human being playing in it. Those are eternally the most important questions and while answering them we have to take into account that energy is fundamental for the existence of the universe. Moreover, any event taking place in the universe requires the energy, nothing, even the most insignificant activity, happens without it. Moreover, considering every detail leads to the conclusion



Big Bang” explorer”- Plank,s time



Big Bang” explorer”- inflation s time



The open sky

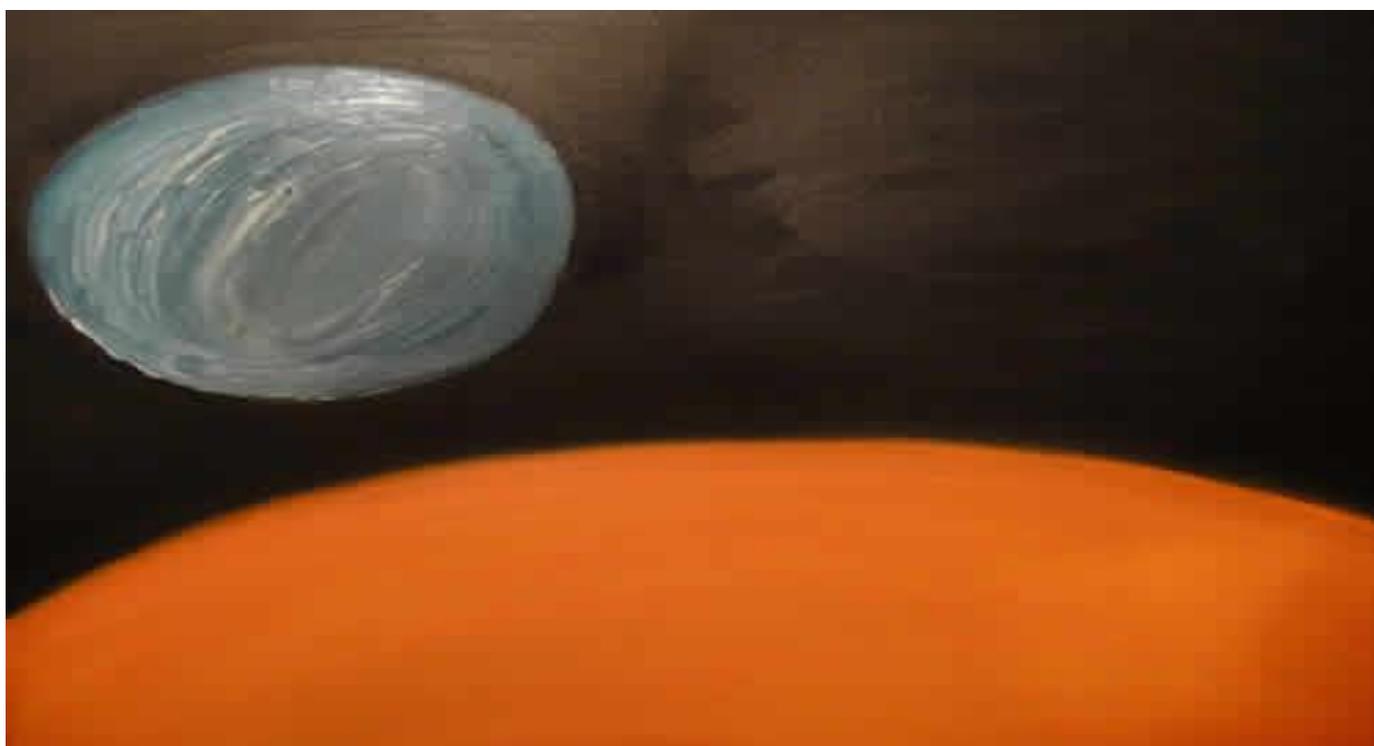


The premier atoms.



The premier stars,

that the universe should have been created for eternal storage of the energy and its transformation into easily-usable form. Another major characteristic component that existed together with the energy even before the Big Bang is the information. The space represents the third major component for the existence of the universe. Notably, any scientific theory up to present day starts the problem of the creation of the universe from the “birth” of the matter and the space in which this matter was formed is almost always ignored. The Bible seems the only exception in this regard according to which the “sky and earth” created by the God on the first day may be interpreted as the space – “sky” and the matter – “earth”. We can suppose that the information, the space and the matter are separate manifestations of energy and are



The Sun and Earth

serving as its hubs; their unification might lead to accumulation of the critical energy and its explosion in a Big Bang. This causes sharp increase of the temperature followed by “opening of space or sky”. As a result, the colossal energy ends up being caught in newly created closed circuit thus causing the expansion of the space due to high pressure and heat. After that the pressure and the temperature

decreases. This causes such colossal energy to disintegrate into separate fragments with lesser power that transform into separate components of matter. The information about the possibilities for energy saving in the universe can be obtained from the following calculations that are based on modification of Einstein's famous equation -  $E=mc^2$ . The modification uses in fact existing speeds during the calculations instead of the speed of the ray of light that equals to  $299\,792\,458\text{ m/sec}=300\,000\text{ km/sec}=3.10.10.\text{cm/sec}$  and which was meant by Einstein in elaboration of this equation. According to this calculation the energy registered during the Big Bang should be equal to:  $E=mc^2=dvc^2=dr^3(s/t)^2=10.93\text{g/cm}^3 \times (10^{-35}).3\text{cm}^3 \times (10^{-35}\text{cm} \times 10.50:10^{-35}\text{sec})^2 \text{cm}^2.\text{sec}^2=10.88.\text{gcm}^2/\text{sec}^2$ , where  $m$  – is the mass of the exploded formation,  $c$  – the speed achieved through the explosion,  $d$  – is the density of the exploded formation,  $v$  – is the volume of the exploded formation,  $r$  – is the radius of the exploded formation which in cosmology is deemed to equal to  $10^{-35}.\text{cm}$ ,  $s$  - the distance covered during the explosion and is represented by such radius of the primary formation, which it had during the “cosmic inflation”. The latter developed on  $10^{-35}$  sec after the Big Bang and was manifested in 10.50-times expansion of the primary formation. As for  $t$ , it is the time spent on covering this distance and, as mentioned, corresponds to  $10^{-35}\text{sec}$ . The amount of energy currently available in the universe should be corresponding to:  $E=mc^2=dvc^2=dr^3c^2=10^{-23}\text{g/cm}^3 \times (10.21).3\text{cm}^3 \times (10.7).2.\text{cm}^2/\text{sec}^2=10.54\text{gcm}^2/\text{sec}^2$ , where  $d$  – is the current density of the space equaling to  $23\text{g/cm}^3$ ,  $v$  – the area of the space the radius of which might be taken as the distance to the farthest star which is  $13,1.10.9$  light years away from us. Taking into account that the ray of light covers  $3.10.5$  km per second, this light should have travelled for  $r=13,1.10.9$  light years  $\times 3.10.10\text{cm/sec}=39,3.10.19\text{cm}=10.21\text{cm}$ . As for  $C$  – it's the speed, the value of which is taken as the speed of the current expansion processes and corresponds  $1,6.10.6\text{km/h}=0,4.10.8\text{cm/sec}=10.7\text{cm/sec}$ . Therefore, the amount of energy currently existing in the universe is much less than the initial volume of the energy and has reduced by approximately 36,4%. Interestingly, this contradicts the law of thermodynamics on constancy of the energy. In this regard, we can suppose that such reduction of the energy is due to the fact that the radius of the universe and its mass are much bigger than the dimensions used by us. We can similarly suppose that this gap in energy has been transferred as free energy into parallel symmetric anti-matter universe that should have similarly formed during the Big Bang. Besides, the volume of the free energy accumulated there will increase in future by part of the energy left in our universe that, in case of unchanged pace of utilization, will completely expire in approximately 4-6.10.9 years. This, however, is associated with the end of the universe. Therefore, the energy accumulated in the neighboring anti-material world will again reach its critical value and cause the Big Bang.

It's possible that the contradictions to the laws of thermodynamics in these calculations are due to missing the phenomena of information. The energy is an invisible value and the most important forms of its manifestations are the information, the mass, the speed, the temperature, the pressure and other factors to which it is in proportionate correlation. A. Einstein should have assumed that the mass and the speed of the matter are the most important components, since the changes in other dimensions are anyway manifested when changes occur in them. However, the manifestation of energy also has the informational component. The changes in the latter, however, cannot be expressed only by the manifestations of mass and speed. Moreover, the consumption process is necessary for the information to manifest; this in its turn requires the consumer or the human being. Hence, taking into account the human factor, the calculations can be represented by the following equation:  $E=IMC^2$ , where  $I$  – is the volume of information, and  $M$  and  $C$  have the same meaning as in the above formula. Therefore, while calculating the volume of the energy existing at the time of the Big Bang we have to take into account that the information at that time had the smallest value and contained only two informational signs in the form of “critical energy”, which corresponds to 1 bit. Hence, the energy at the time of the Bing Bang will be represented in the following way:  $E=imc^2=1\text{b} \times 10.88.\text{gcm}^2/\text{sec}^2=10.88\text{b}.\text{gcm}^2/\text{sec}^2$ . The biggest difficulty in thus calculating the energy in the universe is related to establishing the size of the information. Though, we can suppose that the amount of the information has been progressively increasing since the Big Bang. Hence, the volume of this information should at least be equal to the information stored by the biggest code known in the universe. The optimal form for storage might have the form of the electron spin. It's been established that there are currently 10.78-10.81 electrons in the

universe. It will be possible to store twice as less information than the amount of the electrons currently existing in the universe, i.e.

10.35-10.39 bit. The case is, that each electron possesses 1/2 spins; one sign of the electron “spin up” might correspond to +information, the sign of another electron “spin down” – to –information, while both together - 1 bit of information. Hence, calculating the amount of energy currently available in the universe with these methods gives the following result:  $E=imc^2=10.39b \times 10.54gcm^2/sec^2 = 10.93bgcm^2/sec^2$ . This is approximately 72,2%- bigger than the amount of the energy currently available in the universe ( $10.54gcm^2/sec^2$ ) arrived at through the calculations without taking into account the information factor, while exceeds the volume of the energy at the time of Big Bang only by 5,7% ( $10.88bgcm^2/sec^2$ ). This can be perceived as a negligible difference against such big figures. Thus, we can assume that the energy existing at the point of the creation of the universe has been “meticulously” preserved and re-distributed into the information within the period after the Big Bang. Assuming that the current universe has emerged on the foundation of the old one, and the current cycle will end when the energy generated by the Big Bang expires and transforms into information. At that point the expansion of the universe will probably cease and the speeds will become equal to single digit units. Simultaneously, the space will start to shrink and the matter in it will also become equal to one unit. Therefore, the space and time will disappear as well as all forces and formations of the universe leaving only the information and the energy that transformed into it; its volume will amount to:  $E=imc^2= 10.88b \times 1,0g \times 1,0.2cm^2/sec^2 = 10.88 bgcm^2/sec^2$ . The energy capsuled in such colossal size information seems to be reaching its critical threshold and exploding in a Big Bang. The information of such colossal size should be reaching its critical threshold and exploding in a Big Bang and will recur so as it already happened in the past and will happen in the future.

Notably, apart from the storage of the energy in the universe, its transformation should also be taking place. However, if the energy storage function is predominantly conducted by a nonliving matter, its transformation is mainly done by the living world, specifically, by the human beings. The case being, that the energy that enters the human organism through drink, food and air is primarily transformed into ATF molecules. Part of the energy accumulated in the ATF molecules is used for energy supply of the processes taking place in the organism, while the rest is released into the outer space as the “remains” of catabolism and “psychic energy”, in other words, energy contained in the information represented by the formations that comprise information from thought, words, mimics, music, dance, scent, etc. The initial stage of this process is taking place in anaerobic conditions of hiaoplasma. In this case, one molecule of glucose produces 2 molecules of AFT. The next phase, described by the Swiss scientist R. Koliher in 1850, is accomplished by the mitochondria. These representatives of progenitor bacteria, packed in the cytoplasm, have chosen “associated” living in procariocyte and eucariocyte cells over independence due to eased consumption of oxygen. With the existence of oxygen in the “cristae” of the inner membrane of mitochondria the final stage of the glucose oxidation produces another 36 molecules of ATF. During hydrolyses of the ATF molecule first the ADF and later the AMF molecule is shaped. This process releases approximately 60,0 kj energy from one ATF molecule; this corresponds to  $60kj = 6.10.4 \times 0,24kal = 1,44.10.4kal = 10,7gcm^2/sec^2$  energy. The mitochondrial apparatus of one human can produce approximately 40,0 kg of ATF daily. The energy returned by one individual to the cosmos during one year amounts to:  $E=MNnT-mT=10.7gcm^2/sec^2 \times 2.10.3 \times 4.10.13 \times 8,8.10.3h - 0,0 4.10.13g.cm^2/sec^2 \times 8,8.10.3h = 7.10.11 g.cm^2/sec^2 = 10.12g.cm^2/sec^2$ , where M – is the energy generated by one amount mitochondria within one hour, which is identical to the energy generated by one cell of ATP and on average equals to  $10,7gcm^2/sec^2$ . N - is the number of mitochondria in one cell that amounts to  $2.10.3$  units, n - is the total number of cells in one human being and on average amounts to  $40.10.12=4.10.13$  units, T - is the number of hours in the year that equals to  $8784=8,8.10.3$  hours, while m - is the of energy consumed by one human during the hours, which equals to  $4.10.3kal-24=0,04.10.13g.cm^2/sec^2$  on average. According to the data of the World Health Organization the average life expectancy on the planet currently equals to 67,2 years. Hence, one human releases approximately  $E=10.22gcm^2/sec^2 \times 67,2y = 67,2.10.22gcm^2/sec^2 = 10.14gcm^2/sec^2$  of energy. Pursuant to the data of the same organization the earth is currently inhabited by more than  $7.10,9$  people; according to the



### The energy

calculations of the Dutch scientist P. Grunewald, since the beginning of the civilization that emerged from “mitochondrial Eve” that lived in the African planes some 140000-240000 years ago, the number of people amounts to  $107.10,9$  persons. Therefore, the current generation of humans releases during the life-time  $E=10.14\text{gcm}^2/\text{sec}^2 \times 7.10.9 = 7.10.33 \text{ gcm}^2/\text{sec}^2 = 10.24 \text{ gcm}^2/\text{sec}^2$  of energy, while the energy released by the “civilization of intelligent humans” should be corresponding to  $E=10.14\text{gcm}^2/\text{sec}^2 \times 107.10.9 = 107.10.23\text{gcm}^2/\text{sec}^2 = 10.26\text{gcm}^2/\text{sec}^2$ . The latter falls short by 66,6% to the energy existing in the universe, which, according to our estimations, amounts to  $10.39.b$ . This might be indicating that the energy generated by the civilization is “constrained” by the information generated by it. Hence, based on such calculations, we can suppose that the bigger the number of the people and the amount of energy transformed by them into the energy, the sooner the energy contained in the matter will expire and the conditions for the next Big Bang be created. Obviously, the remaining part of the energy is “generated” by other representatives of the living world, such as bacteria, plants, animals and others. Besides, the thermo-nuclear and other processes on the Sun and other stars should be playing a significant role in maintaining the energy balance. It’s also possible that the energy generated by other forms of life is also placed in the remaining part of the universe’s information, in creation of which they are also taking part.



### The parerel’s universe .

Researching the universe leaves the impression that the human being, apart from transforming the energy into the easily-usable form, is also playing the role of its “observer”. This is manifested in the supervision of the “stability” of the universe’s structure. Each individual aspires to postpone the death and prolong the living, which is “imprinted” in his sub-consciousness as a primate urge and defines his/her behavior. To accomplish this wish of prolonging life and avoiding the critical condition, first of all, the house the human being is living in should be solid. The house of the human is placed in the universe and for its firmness the universe itself should be stable. The latter requires its composite atoms, sub-atomic formations and elementary particles to be exactly in the place that guarantees such stability. This should be taking place due to the electrons being where the human beings want them to be. The humans, however, want the electrons to be in the locations that ensure their (the humans) longevity. Hence, the primate wish of prolonging the life of the human being “registered” in his sub-consciousness is, in fact, the hidden form of the wish to maintain the stability of the universe. Hence, if the critical condition of the energy is the prerequisite for the creation of the universe, the critical condition of life seems to be the necessary condition for its maintenance. This becomes more believable if we take into account that human desires have tremendous power; with it the Christ resurrected Lazarus, Moses “parted” the waves of Nile. The power of materialization of the ideas is best confirmed by the so called “visit to the doctor” and “placebo” effects. In the former case, the majority of the patients feel better after the visit to the doctor, though have not started yet the prescription. In the latter case, the majority of the patients feel better after taking an indifferent ingredient under the title of a specific drug. It is quite possible that the humans are placed on the hierarchic ladder of the universe just like the mitochondria are in the human body, and we are in a similar “associated” position with the universe as “poor” mitochondria towards us: we play the role of the “observer” and, when necessary, “milk” the energy.



## The God

However, the human being, apart from being the “observer” of the universe and “transformer” of its energy, might also have another function. This should be the ability to store the universal information. As already mentioned above, the information is “mute” and is only manifested when used. This requires existence of the user, who, in order to use this information, should be possessing it in the first place. The issue, however, is connected to the human’s ability to store the information. Therefore, we need to



Ieshy



The Holy Spirit

determine whether the chromosome apparatus of one human cell can store the vast information available in the universe. We can use the following equation for this purpose:  $I=N.B/M$ , where I-information, N-total number of nucleotides in the DNA, B- the smallest unit of information, and M- number of nucleotides taken as the unit of determination. If we want to find out the volume of information stored by the DNA of one human cell through “protein synthesis” code, we have to take into account that one

determinant codon of one amino acid might be corresponding to one sign of the information; while the second triplet of the nucleotides determining synthesis of the second amino acid should have another sign of the information. While 6 nucleotides contained in both codons might be corresponding to one unit of the information, i.e. 1 bit. Besides, it's known that one human cell contains  $6.10^9$  nucleotides. This leads to the following calculation of the final result  $I=N.B/M=6.10.9nX1b:6n=10.9$  bit. This result is significantly behind the total volume of the information in the universe calculated using the spin of the electron. Hence, it is quite possible that this information in DNA is stored with the use of musical notes. In this respect, each one of the seven musical notes is presumably containing at least one nucleotide, which corresponds to one sign of the information. Another note should be containing another complementary nucleotide that has another sign of the information. The section of the DNA composed by two complementary nucleotides should be holding one unit of the information, i.e. 1 bit. Therefore, using the above equation, the information to be stored using the "musical" code should equal to  $I=N.B/M=6.10.9nX1b:2n=3.10.9$  bit. <http://www.musicfromthegenome.org.uk> <http://www.Musicfromthegenome.org.uk/audioplayer.html> This amount is higher than the volume of the information stored by means of "protein synthesis" code, while is lagging behind the total volume of the information available in the universe. This DNA coding process might also be accomplished using the alphabet of a certain language or even the words consisting of such letters. Taking into account that majority of languages most frequently use 5-letter words, we may consider the section of the DNA comprised from 5 nucleotides as the unit of determination. Of these, one word and one sign of the information might be corresponding to the first five complementary nucleotides; the second word and sign of the information to the following five complementary nucleotides. Hence, the information stored by this code should equal to:  $I= N.B/M=6.10.9nX1b:10n=0,6.10.9$  bit. This is a smaller amount compared to the information stored using the musical notes and is larger than the one stored by the "protein synthesis", but is still significantly lagging behind the total volume of the information available in the universe. Therefore, in terms of comprehensive storing of the entire information of the universe the ability of this code also seems limited. This research code might also correspond to the spin of the electron. In such code one spin of the electron might be representing one sign of determination, while another sign – by a spin of another electron, the spins of the both electrons together should be corresponding to one unit of the information,



The Earth -Adam,s era



Noah,s era



Spring will come soon

i.e. 1 bit. The number of electrons in one nucleotide amounts to 1445 units on average. Thus, the information stored by these electrons in the DNA of one cell should equal to:  $I = N \cdot B / M = 6 \cdot 10^9 \cdot 1445 \cdot 2 = 433,5 \cdot 10^9 = 4,310 \cdot 10^{11} \text{ bit}$ . This is significantly more than the information stored through the “protein synthesis”, “musical” or “verbal” codes. However, storing of the entire information available in the universe using this code does not seem likely either. The picture is better when the information in the DNA of one human cell is stored simultaneously by all these codes, which corresponds to the following volume:  $I = 10^9 \cdot 3 + 10^9 \cdot 0,6 + 10^9 \cdot 4,3 \cdot 10^{11} = 7,9 \cdot 10^{11} = 7,9 \cdot 10^{11} \text{ bit}$ . This is almost totally corresponding to the information available in the universe, which presumably equals to  $10^{105} - 10^{109} \text{ bit}$ .



Roud to nowhere



Shota Rustaveli

Therefore, the DNA molecule of chromosome apparatus of one human cell can store the entire information of the universe only through intertwining these four codes and, in this case, everything is more complicated than with “protein synthesis” and “splicing” codes. The “Boson-Einstein” informational bridges might even lose the meaning, since the entire information of the universe can be transferred to the human from his birth, similarly to the “death code” discovered earlier by us. Hence, the universe should have been created by the Big Bang of the energy in critical condition and its function

might entail safely storing this energy like an “accumulator unit”. The human being, apart from being the “observer” of the universe and “transformer” of its energy, might also be playing the role of the “warehouse” or the “library” of the information. This seems to be exactly the miracle, that made Sh. Rustaveli proclaim in the twelfth century “the Sun cannot be without you, since you are its part”.



Father Gabriel



The end.

**ზ.ხელაძე, ზგ.ხელაძე**

**ეს რა საოცარი მიზნით შესაძლოა შეიქმნა სამყარო და რა იდუმალი მისიით მოეგლინა ადამიანი ამ სამყაროში.**

**(თბილისი, საქართველო)**

გამოთქმულია ვარაუდი, რომ სამყარო შეიქმნა “კრიტიკული ენერჯის” უხიფათო ფორმაში ტრანსფორმაციის მიზნით. ეს ამ ენერჯის უსულო ფორმის მატერიაში განივთების სახით უნდა ხორციელდებოდეს. ადამიანი ამ სამყაროში უნდა ასრულებდეს ენერჯის ტრანსფორმატორის და ინფორმაციის შენახვის ფუნქციას. თუმცა ის შესაძლოა ერთგვარი “მაყურებლის” როლსაც ასრულებდეს და მის სამყაროს მდგრადობასაც უწყობდეს ხელს.