Two natural DNA black strings may be new windows into extra dimensions: The effect of extra dimensions on biological systems

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Recently, some scientists claimed that there may be a black hole like shell in the center of earth. Now, the question arises that what is the relation between this black hole and life? We response to this question by introducing a duality between number of microstates of a DNA and a black string. We show that by compacting a DNA in an small place with 10^{-9} size shorter, a curved space-time is emerged and DNA evolves and transmits to a black string. This DNA black string could open a new window into extra dimensions. Thus, we have two natural telescopes for exploring extra dimensions, one is DNA which is compacted interior of cells and second is a DNA black string in the center of earth. We obtain the relation between number of microstates of a DNA and number of dimensions and propose experimental methodes for detecting effects of extra dimensions on biological system. For example, in one method, cosmic waves leads to motions of electrons in metals and emergence of input current which is observed by an scope. On the other hand, waves of earthquake lead to the motion of electrons in a metal and emergence of output current which is observed by another scope. Using the relations between number of microstates of DNA black string interior of earth and differences between input and output currents, we can obtain number of dimensions. Also, this method helps us to predict time and location of earthquakes on the earth.

Keywords: Black hole, Earth, Extra dimensions, waves, DNAs, water

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I. INTRODUCTION

Black holes and their related subjects are of main puzzles in science which many scientists work on them [1]. Physics of these objects is approximately known, however, they themselves are lost and many cosmological detectors and telescopes try to find them. On the other hand, concept of black hole isnt limitted to cosmology and in some high energy colliders, some objects may be emerged that change space-time [2]. These objects are known as Tev black holes or mini black holes that are formed from concentrating of large amount of energy in an small place at large hadron collider [3–5]. Thus, some types of black hole-like structures could be observed on the earth. Newly, some scientists who worked in NASA claimed that there is a black hole at the center of earth which is the main cause of the high temperature of core and magnetic field around the earth [6]. This idea may change some old beliefs about formation of earth and solar system. In this model, earth is a planet that has been formed around a black hole and has properties of that object in it's core. In this paper, we show that if this theory be true, black hole should have a relation with life. To this aim, there should be a relation between structure of black hole and biological matters like DNA. For this reason, we compare number of microstates of DNA and show that it is a black string which is emerged by compacting a long string in an small place with a size 10^{-9} smaller. This compactification leads to the emergence of curved space-time and black holes in both cells and earth's core. Thus, these two systems could be windows into extra dimensions and help us to know our universe.

Extra dimension is one of main subjects that has many effects on various fields of science [7–9]. If these dimensions are existed, we should observe their effects in four dimensional universe. In fact, some objects in our universe could communicate with some objects in extra dimensions. One of examples is dark part of DNA that has the main role on the continunity of the life. Recently, Hargreaves and his colleagues have encountered a dark part of DNA when sequencing the genome of the sand rat (Psammomys obesus), a species of gerbil that lives in deserts. In particular they wanted to study the gerbils genes related to the production of insulin, to understand why this animal is particularly susceptible to type 2 diabetes. But when they looked for a gene called Pdx1 that controls the secretion of insulin, they found it was missing, as were 87 other genes surrounding it. Some of these missing genes, including Pdx1, are essential and without them an animal cannot survive.

The first clue was that, in several of the sand rats body tissues, they found the chemical products that the instructions from the missing genes would create. This would only be possible if the genes were present somewhere in the genome, indicating that they werent really missing but just hidden [10]. So where are they? We can response to this question in extra dimensions. Until now, some investigations have been done on the effects of extra genes in extra dimensions. For example, it has been shown that DNA teleportation [11, 12] is possible if DNA, water and wave be 4 + n-dimensional objects [13]. Also, molecules of water could be able to store information if they have DNA-like structures in extra dimensions. On the other hand, these genes in extra dimension could act like the receiver or sender of waves and exchange information with genes in four dimensions [14]. And finally in one of newest works, it has been shown that compacting DNA with 7 meter long in a very small place leads to the emergence of curved space-time around it. This black hole-like system makes DNA as a window into extra dimension. Then, using the concept of 11-dimensional black branes, the relation between Tsallis -entropy [15] of DNA-Branes exterior and interior of sheel for chick embryo has been calculated [16]. Motivated by these researches, we explore the existence of the extra dimensions, by considering evolutions of DNAs. However, to consider evolutions of cosmological objects interior of extra dimensions, we can use of the earth as the biggest telescope. Until now, there is a little information about the structure of the earth. For example, it has been known that earth has seven layers. These layers are: 1. Inner core 2. Outer core 3.Asthenosphere 4.Mantle 5.Upper mantle 6.Crust 7.Lithosphere [17, 18]. On the other hand, the earth has an atmosphere which has the main role on some of it's evolutions. Earth's atmosphere can be divided (called atmospheric stratification) into five main layers. Excluding the exosphere, the atmosphere has four primary layers, which are the troposphere, stratosphere, mesosphere, and thermosphere [19, 20]. Thus, there isnt sufficient information about the earth. In this research, we will show that one reason for the high temperature of core could be a DNA-like black hole or black string in it. This DNA-like object is in fact a compacted DNA-like shell with a long around the size of 10^9 times the size of the core of earth which is compacted in center of earth. When this DNA-like shell communicate with objects in extra dimensions, some extra matters are emerged that cause to the un-stability of the earth's layer and occuring earthquakes. This is similar to what that occurs interior of an egg cell.

The outline of the paper is as follows. In section II, using concepts of black strings, we

propose a mathematical model for calculating entropy, number of microstates and temperature of DNAs interior of cell and DNA-like structure interior of the earth's core. In section III, we will suggest some experimental method for detecting extra dimensions through waves of DNAs.

II. NUMBER OF MICROSTATES OF A DNA BLACK STRING

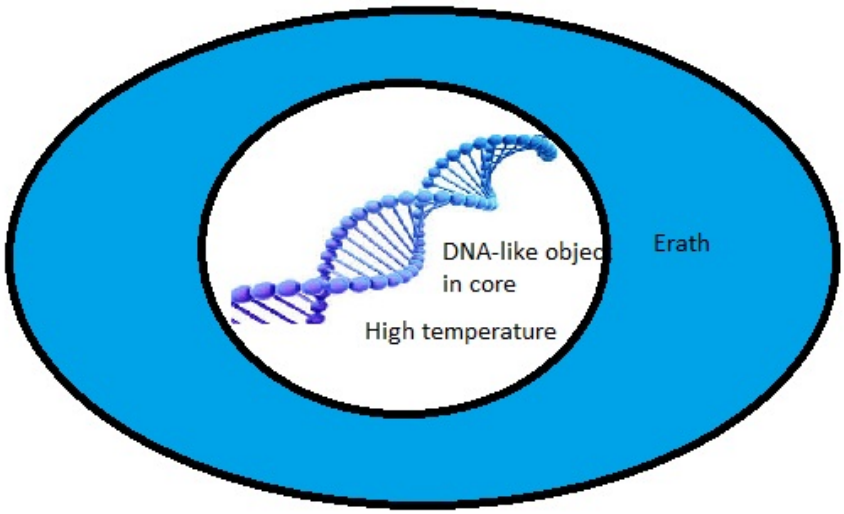
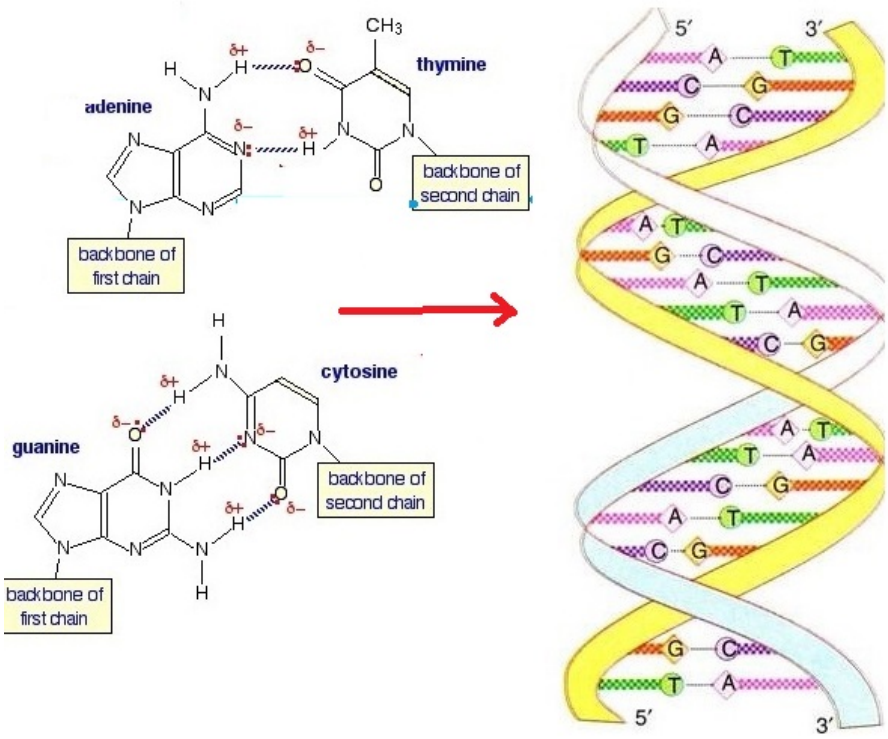


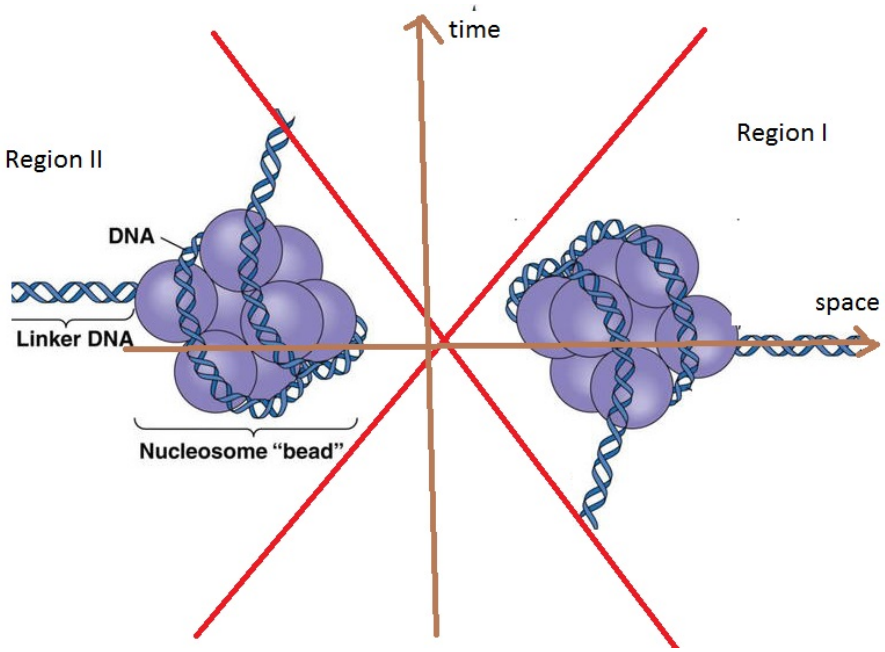
FIG. 1: DNA-like structure interior of the core of the earth.

In this section, we calculate number of microstates of a DNA like structure interior of the core of the earth (See figure 1) and also cell. In a cell, a DNA has a longer around 7 meter that is compacted in small size around 10^{-9} meter. This DNA has been constrcuted from hexagonal and pentagonal molecules (See figure 2). Previously, it has been shown that compacting this long DNA in a very small place leads to the emergence of a Rindler space-time and producing high temperature [14, 16] (See figure 3). In this space-time, a new mirror of DNA is emerged in a new region II that interacts with a DNA in region I. Also, it has been shown that DNA has some missing genes in extra dimensions that could exchange information with genes in four dimensional universe [13] (See figure 4). Each gene is formed from joining hexagonal and pentagonal molecules (See figure 5). The existence of extra dimensions could give good reasons for some experiments like the water memory and DNA teleportation in [11]. The same conditions could be occured for a DNA-like structure



1.jpg

FIG. 2: A DNA is formed from joining hexagonal and pentagonal molecules.



2.jpg

FIG. 3: Compacted DNA in a Rindler space-time.

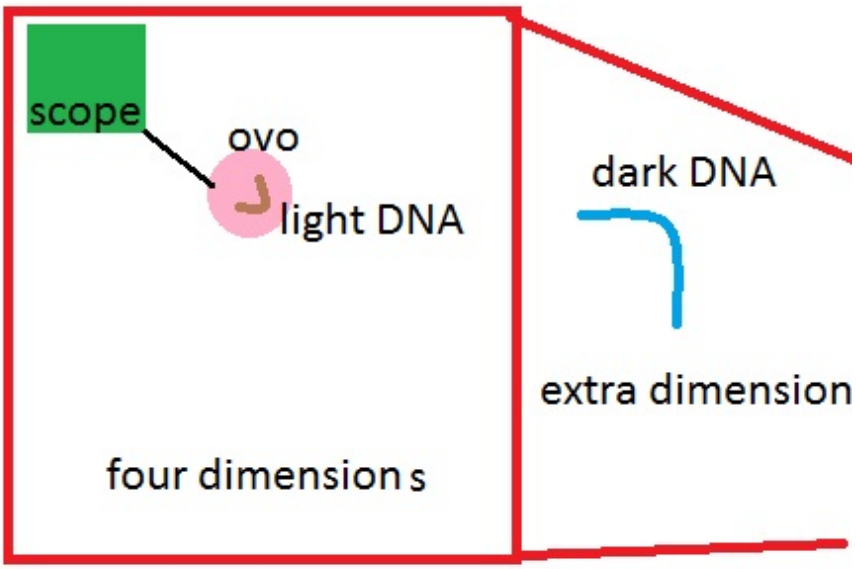


FIG. 4: Dark part of DNA in extra dimensions.

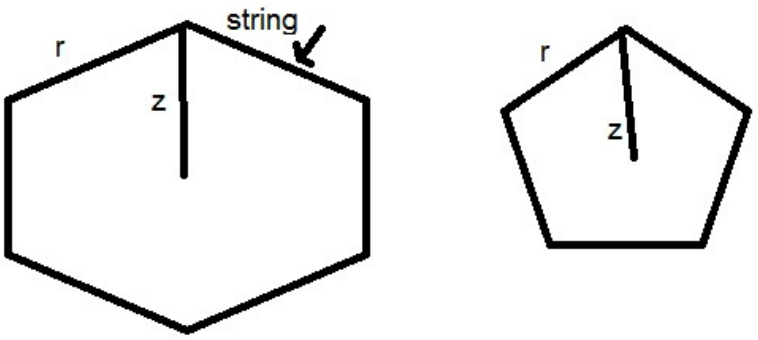


FIG. 5: Hexagonal molecule of a DNA.

interior of the core. To consider the DNA-like structure, we specialize to an embedding of one base of DNA world volume in Minkowski space-time with metric [13, 14, 16];

$$ds^2 = -dt^2 + dr^2 + r^2\Big(d\theta^2 + sin^2\theta d\phi^2\Big) + \sum_{i=1}^{6} dx_i^2 \tag{1}$$

without background fluxes. Here, t is time, r is the radius of page of DNA and θ is the angle of rotation. The action of this base of DNA can be given by:

$$S = -T_{tri} \int d^3\sigma \sqrt{\eta^{ab} g_{MN} \partial_a \phi^M \partial_b \phi^N + 2\pi l_s^2 G(F))}$$
$$G = (\sum_{n=1}^{N} \frac{1}{n!} (-\frac{F_1..F_n}{\beta^2}))$$
$$F = F_{\mu\nu} F^{\mu\nu} \quad F_{\mu\nu} = \partial_\mu A_\nu - \partial_\nu A_\mu \tag{2}$$

where g_{MN} is the background metric, $\phi^M(\sigma^a)$'s are scalar fields which are produced by pairing electrons ($\phi = \psi_{up}\psi_{down}$) , N is number of exchanged photons between baes or DNAs, σ^a's are the DNA coordinates, $a, b = 0, 1, ..., 3$ are world-volume indices of DNA and $M, N = 0, 1, ...,$ are number of paired electrons. Also, G is the nonlinear field and A is the photon which exchanges between bases or DNAs.

Using the metric in equation (1), we can write below relations between coordinates of bulk and a base of DNA [13, 14, 16]:

$$t(\sigma) = \tau \quad r(\sigma) = \sigma, \qquad x_1(\sigma) = z \tag{3}$$

Using above relations, for this DNA in flat space time, the action is given by [13, 14, 16]:

$$S = -\int d\sigma \sigma^2 \sqrt{1 + z'^2 - 2\pi l_s^2 G(F)} \tag{4}$$

For this action, it has been asserted that momentum density is given by [13, 14, 16]:

$$\Pi = \frac{2\pi l_s^2 G'(F) F_{01}}{\sqrt{1 + z'^2 - 2\pi l_s^2 G(F)}} \tag{5}$$

where $'$ denotes the derivative respect to the field (F). On the other hand, it has been asserted that there is a relation between momentum density and σ [13, 14, 16]:

$$\Pi = \frac{K}{\sigma^2} \tag{6}$$

Using equations (5 and 6) and assuming ($z' << G(F)$), we can obtain :

$$\sigma = [\frac{\sqrt{1 - 2\pi l_s^2 G(F)}}{2\pi l_s^2 G'(F) F_{01}}]^{\frac{1}{2}} \tag{7}$$

Above equation shows that coordinates of a base of DNA depend on non-linear fields and increase by increasing the strength of fields. We also obtain the acceleration, with taking derivative of above coordinate respect to time:

$$a=\frac{d^2\sigma}{dt^2}=[\frac{d^2}{dt^2}[\frac{\sqrt{1-2\pi l_s^2 G(F)}}{2\pi l_s^2 G'(F)F_{01}}]^{\frac{1}{2}}]=g_{base}=G_{base}\frac{M_{base}}{R_{base}} \tag{8}$$

Above equation shows that nonlinear electromagnetic waves lead to the acceleration of system. This acceleration changes physical properties of system. On the other hand, this acceleration leads to the acceleration of the base and has a direct relation with g and mass and radius of base. In this case, the relation between the world volume coordinates of the base of DNA (τ,σ) and the coordinates of Minkowski space-time (t,r) are [13, 14, 16];

$$\begin{aligned} G_{base}\frac{M_{base}}{R_{base}}t&=e^{G_{base}\frac{M_{base}}{R_{base}}\sigma}\sinh(G_{base}\frac{M_{base}}{R_{base}}\tau)\\ G_{base}\frac{M_{base}}{R_{base}}r&=e^{G_{base}\frac{M_{base}}{R_{base}}\sigma}\cosh(G_{base}\frac{M_{base}}{R_{base}}\tau)\end{aligned} \tag{9}$$

We can suppose that the coordinate along the separation distance between DNA's terminals ($x^4=z$) depends on the $r=\pm\frac{1}{a}e^{\pm a\sigma}\cosh(a\tau)$ and by using equations (9), rewrite equations (1) as ;

$$\begin{aligned} ds_I^2=&-dt^2+\Big(1+(\frac{dz}{dr})^2\Big)dr^2+r^2\Big(d\theta^2+sin^2\theta d\phi^2\Big)+\sum_{i=1}^{5}dx_i^2=\\ &\Big(e^{2G_{Earth}\frac{M_{base}}{R_{base}}\sigma}+\frac{1}{\sinh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)}(\frac{dz}{d\tau})^2\Big)d\tau^2-\\ &\Big(e^{2G_{Earth}\frac{M_{base}}{R_{base}}\sigma}+\frac{1}{\cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)}(\frac{dz}{d\sigma})^2\Big)d\sigma^2+\\ &\frac{1}{\sinh(G_{base}\frac{M_{base}}{R_{base}}\tau)\cosh(G_{base}\frac{M_{base}}{R_{base}}\tau)}(\frac{dz}{d\tau}\frac{dz}{d\sigma})d\tau d\sigma+\\ &\Big(\frac{1}{G_{base}\frac{M_{base}}{R_{base}}}e^{G_{base}\frac{M_{base}}{R_{base}}\sigma}\cosh(G_{base}\frac{M_{base}}{R_{base}}\tau)\Big)^2\Big(d\theta^2+sin^2\theta d\phi^2\Big)+\sum_{i=1}^{5}dx_i^2 \end{aligned} \tag{10}$$

Above metric corresponds to a base of a DNA black string. This metric is a signature of the existence of a duality between DNAs and black strings. Now, we can replace acceleration with it's equivalent temperature.To obtain true relation between temperature and the size of core, we use of concepts of black strings:

$$dM_{black-base} = T_{black-base} dS_{black-base} \rightarrow T_{black-base} = \frac{dM_{black-base}}{dS_{black-base}} \tag{11}$$

Where, $T_{black-base}$ is temperature of black base. Previously, thermodynamical parameters have been obtained in [13, 14, 16]:

$$dM_{black-base} = \frac{dM_{black-base}}{dz_{black-base}} dz_{black-base}$$

$$dz_{black-base} \simeq$$
$$\Big(e^{-4G_{base}\frac{M_{base}}{R_{base}}\sigma} \sinh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)\cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)\Big) \times$$
$$\Big(\frac{F_{DBI,I,A}(\tau,\sigma)\Big(\frac{F_{DBI,I,A}(\tau,\sigma)}{F_{DBI,I,A}(\tau,\sigma_0)} - e^{-4G_{base}\frac{M_{base}}{R_{base}}(\sigma-\sigma_0)}\frac{\cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau_0)}{\cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)}\Big)^{-\frac{1}{2}}}{F_{DBI,I,A}(\tau_0,\sigma)\Big(\frac{F_{DBI,I,A}(\tau_0,\sigma)}{F_{DBI,I,A}(\tau_0,\sigma_0)} - e^{-4G_{base}\frac{M_{base}}{R_{base}}(\sigma-\sigma_0)}\frac{\cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau_0)}{\cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)}\Big)^{-\frac{1}{2}}} -$$
$$\frac{\sinh^2(a\tau_0)}{\sinh^2(a\tau)}\Big)^{-\frac{1}{2}}$$
$$\frac{dM_{I-A}}{dz} = \frac{dM_{II-B}}{dz} =$$
$$\frac{4T_{D3}^2}{\pi T_{0,I-A}^4}\Big(\frac{1}{G_{base}\frac{M_{base}}{R_{base}}}e^{G_{base}\frac{M_{base}}{R_{base}}\sigma}\cosh(G_{base}\frac{M_{base}}{R_{base}}\tau)\Big)^2 \times$$
$$\frac{F_{DBI,I,A}(\sigma,\tau)\Big(\sinh^2(G_{base}\frac{M_{base}}{R_{base}}\tau) + cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)\Big)}{\sqrt{F_{DBI,I,A}^2(\sigma,\tau) - F_{DBI,I,A}^2(\sigma_o,\tau)}} \times$$
$$\frac{4\cosh^2\alpha_{I-A} + 1}{\cosh^4\alpha_{I-A}}$$

$$d\bar{S}_{black-base} =$$
$$\frac{4T_{D3}^2}{\pi T_{0,I-A}^5}\Big(\sinh^2(G_{base}\frac{M_{base}}{R_{base}}\tau) + cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)\Big) \times$$
$$\frac{F_{DBI,I,A}(\sigma,\tau)\Big(\frac{1}{G_{base}\frac{M_{base}}{R_{base}}}e^{G_{base}\frac{M_{base}}{R_{base}}\sigma}\cosh(a\tau)\Big)^2}{\sqrt{F_{DBI,I,A}^2(\sigma,\tau) - F_{DBI,I,A}^2(\sigma_o,\tau)}} \times$$

$$\frac{4}{\cosh^4 \alpha_{I-A}} \tag{12}$$

with the definition of $F_{DBI,I,A}$ given below:

$$F_{DBI,I,A} = F_{DBI,II,B} = \Big([\frac{d^2}{dt^2}[\frac{\sqrt{1-2\pi l_s^2 G(F)}}{2\pi l_s^2 G'(F) F_{01}}]^{\frac{1}{2}}]^{-1} e^{[\frac{d^2}{dt^2}[\frac{\sqrt{1-2\pi l_s^2 G(F)}}{2\pi l_s^2 G'(F) F_{01}}]^{\frac{1}{2}}]\sigma} \times$$
$$\cosh([\frac{d^2}{dt^2}[\frac{\sqrt{1-2\pi l_s^2 G(F)}}{2\pi l_s^2 G'(F) F_{01}}]^{\frac{1}{2}}]\tau)\Big)^2 \frac{4\cosh^2 \alpha_{I-A} - 3}{\cosh^4 \alpha_{I-A}} \tag{13}$$

And

$$\cosh^2 \alpha_{I-A} = \frac{3}{2}\frac{\cos\frac{\delta_{I-A}}{3} + \sqrt{3}\cos\frac{\delta_{I-A}}{3}}{\cos\delta_{I-A}}$$
$$\cos\epsilon_{I-A} = \frac{1}{\sqrt{1 + \frac{K^2}{\Big([\frac{d^2}{dt^2}[\frac{\sqrt{1-2\pi l_s^2 G(F)}}{2\pi l_s^2 G'(F) F_{01}}]^{\frac{1}{2}}]^{-1} e^{-[\frac{d^2}{dt^2}[\frac{\sqrt{1-2\pi l_s^2 G(F)}}{2\pi l_s^2 G'(F) F_{01}}]^{\frac{1}{2}}]\sigma} \cosh(a\tau)\Big)^4}}} \tag{14}$$

And also the angles δ_{I-A} are defined by:

$$\cos\delta_{I-A} = \bar{T}^4_{0,I-A}\sqrt{1 + \frac{K^2}{\Big(a^{-1}e^{-[\frac{d^2}{dt^2}[\frac{\sqrt{1-2\pi l_s^2 G(F)}}{2\pi l_s^2 G'(F) F_{01}}]^{\frac{1}{2}}]\sigma}\cosh([\frac{d^2}{dt^2}[\frac{\sqrt{1-2\pi l_s^2 G(F)}}{2\pi l_s^2 G'(F) F_{01}}]^{\frac{1}{2}}]\tau)\Big)^4}} \tag{15}$$

where T_0 is the temperature of the DNA in non-Rindler space-time, $M_{black-base}$ is the mass of base and $\bar{S}_{black-base}$ is the entropy of black-base. Using relation (12) in relation (11),we can obtain explicit form of temperature in an accelerating base of DNA:

$$T_{blackbase} = T_{0,black-base}\Big(4\cosh^2\alpha_{I-A} + 1\Big) \times$$
$$\Big(e^{-4G_{Earth}\frac{M_{base}}{R_{base}}\sigma}\sinh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)\cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)\Big) \times$$
$$\Big(\frac{F_{DBI,I,A}(\tau,\sigma)\Big(\frac{F_{DBI,I,A}(\tau,\sigma)}{F_{DBI,I,A}(\tau,\sigma_0)} - e^{-4G_{Earth}\frac{M_{base}}{R_{base}}(\sigma-\sigma_0)}\frac{\cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau_0)}{\cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)}\Big)^{-\frac{1}{2}}}{F_{DBI,I,A}(\tau_0,\sigma)\Big(\frac{F_{DBI,I,A}(\tau_0,\sigma)}{F_{DBI,I,A}(\tau_0,\sigma_0)} - e^{-4G_{base}\frac{M_{base}}{R_{base}}(\sigma-\sigma_0)}\frac{\cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau_0)}{\cosh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)}\Big)^{-\frac{1}{2}}} -$$
$$\frac{\sinh^2(G_{base}\frac{M_{base}}{R_{base}}\tau_0)}{\sinh^2(G_{base}\frac{M_{base}}{R_{base}}\tau)}\Big)^{\frac{1}{2}} \tag{16}$$

These temperatures depend on the number of microstates of a base, nonlinear fields and time. To calculate temperature of a DNA, we should sum over microstates of all bases of a DNA. We obtain number of microstates of a DNA in terms of microstates in regions I and II of four dimensional universe and extra dimensions:

$$\begin{aligned}
&\Omega_{DNA} = \\
&\Omega_{I-A,DNA,4-dimensions}\Omega_{II-A,DNA,4-dimensions} \times \\
&\Omega_{I-A,DNA,extra-dimensions}\Omega_{II-A,DNA,extra-dimensions} = \\
&\Pi_{base,n=1}^{N}\Omega_{I-A,base,n,4-dimensions}\Omega_{II-A,base,n,4-dimensions} \times \\
&\Omega_{I-A,base,n,extra-dimensions}\Omega_{II-A,base,n,extra-dimensions}
\end{aligned} \tag{17}$$

Above equation shows that total number of microstates depends on the number of microstates in four and extra dimensions and in regions of I and II of DNA. Using above equations, we obtain total entropy of DNA

$$\begin{aligned}
&\bar{S}_{black-DNA} = K_B log(\Omega_{DNA}) = \\
&\Sigma_{base,n=1}^{N}\bar{S}_{I-A,base,n,4-dimensions} + \bar{S}_{II-A,base,n,4-dimensions} + \\
&\bar{S}_{I-A,base,n,extra-dimensions} + \bar{S}_{II-A,base,n,extra-dimensions}
\end{aligned} \tag{18}$$

Also, mass of a DNA black string can be obtained by summing over masses of all black bases:

$$\begin{aligned}
&M_{black-DNA} = \\
&\Sigma_{base,n=1}^{N}M_{I-A,base,n,4-dimensions} + M_{II-A,base,n,4-dimensions} + \\
&M_{I-A,base,n,extra-dimensions} + M_{II-A,base,n,extra-dimensions}
\end{aligned} \tag{19}$$

Thus, temperature of a DNA black string can be obtained:

$$dM_{black-DNA} = T_{black-DNA}dS_{black-DNA} \rightarrow T_{black-DNA} = \frac{dM_{black-DNA}}{dS_{black-DNA}} \tag{20}$$

This temperature depends on number of microstates of DNA, it's coordinates and also number of extra dimensions. Thus, by using the relation between number of microstates and temperature, we can obtain number of extra dimensions. It is concluded that DNA could be a new window into extra dimensions.

III. SOME EXPERIMENTAL METHODS FOR DETECTING EXTRA DIMENSIONS THROUGH DNAS

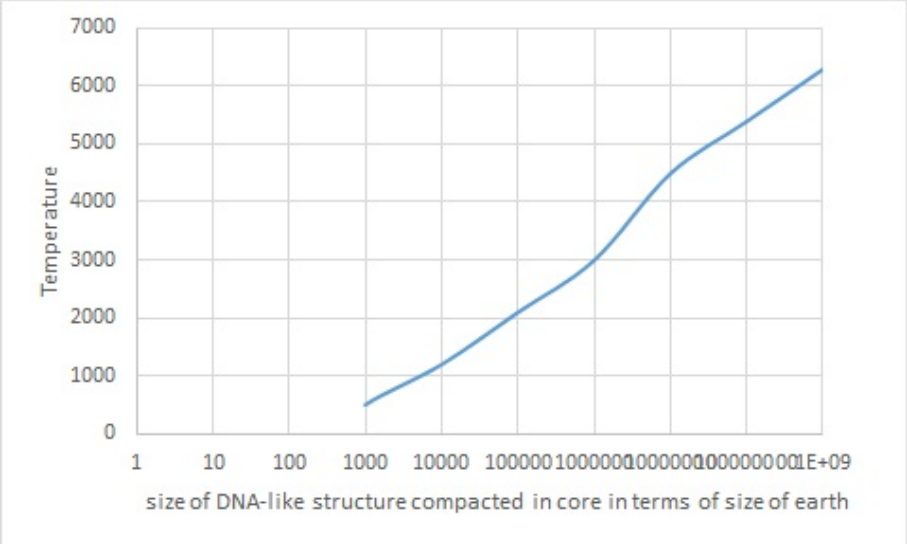


FIG. 6: Dependency of temperature of core on the size of DNA-like structure.

Now, we examine the model and measure dependency of temperature of the earth's core on the size of DNA-like structure. In figure 6, we show dependency of temperature in equation (20) on the size of a DNA-like structure. It is clear that by increasing the size of a DNA-like structure, temperature of a system increases and tends to large values. To obtain the predicted value of temperature for the core of the earth, a DNA like structure should have a size around 10^9 times the diameter of the earth which is compacted interior of the core. This structure produces a temperature around 6400 K which is in good agreement with predictions in geophysics for temperature of the core. Also, to draw this figure, we assume that number of dimensions is eleven and microstates of four dimensional DNA and dark DNA in extra dimensions are the same. Thus, some reasons for producing high temperature of core could be number of microstates of dark DNAs in extra dimensions.

For next step, we design two new methods for detecting effects of extra dimensions through counting number of microstates of DNA.In first method, we connect an inductor from one side to one generator and from another side to one scope. We put a vessel of water interior of an inductor and send a current to it. We measure number of microstates of water by considering differences between input and output currents. We can replace potential of bases by current and use of below relations:

$$I_{output} - I_{input} = eV = eat = \frac{d\sigma}{dt} = e[\frac{d}{dt}[\frac{\sqrt{1-2\pi l_s^2 G(F)}}{2\pi l_s^2 G'(F) F_{01}}]^{\frac{1}{2}}] = eG_{base}\frac{M_{base}}{R_{base}}t \quad (21)$$

Substituting above current in equation (17), we can obtain number of microstates in terms of output currents. Now, we put some DNAs interior of vessel of water and measure output currents by scope. Using this method, we can obatin number of microstates of DNA (See figure 7-Right).

In sectond method, cosmic waves leads to motions of electrons in metals and emergence of input current. On the other hand, wave of earthquake lead to the motion of electrons in a metal and emergence of output current. Using equations (17 and 21), we can obtain number of microstates of DNA like structure interior of earth. On the other hand, having number of microstates and input currents which are emerged by cosmic waves, we can use of equations (17 and 21) and predict time and location of earthquake.

In figure 8, we present number of microstates of DNA in terms of input currents. Gray line corresponds to four dimensional universe, red color line is related to ten dimensional universe and blue color line corresponds to eleven dimensional manifold. Thus, by analyzing datas with these figures, we can estimate number of extra dimensions.

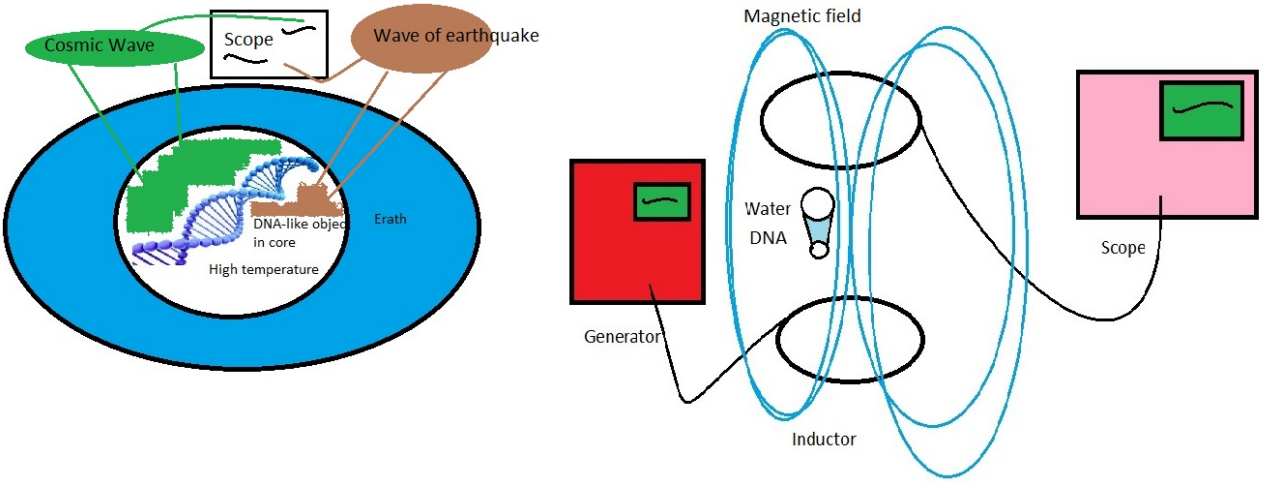


FIG. 7: A:Counting number of microstates of DNA black string intrior core (Left). B: Counting number of microstates of DNA black string interior of cell (Right)

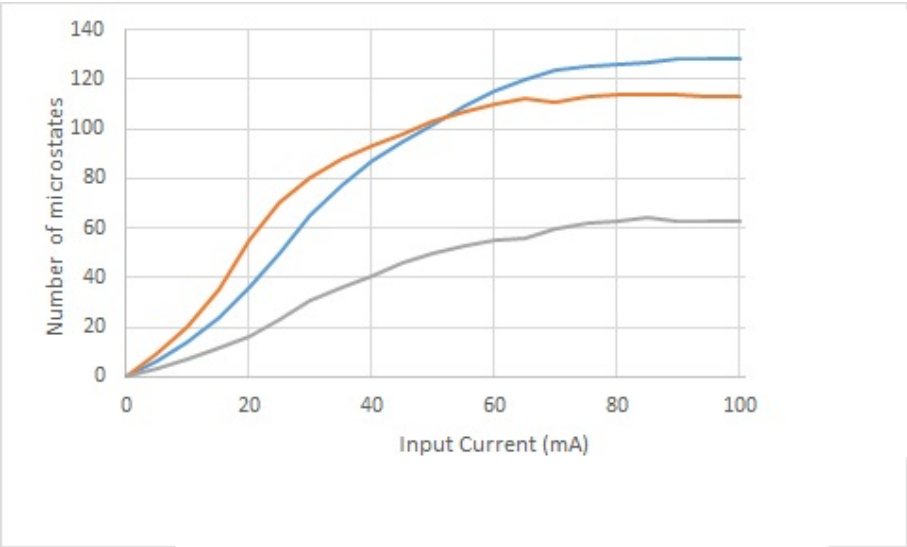


FIG. 8: Number of microstates of DNA in terms of input currents. . Gray line corresponds to four dimensional universe, red color line is related to ten dimensional universe and blue color line corresponds to eleven dimensional manifold.

IV. SUMMARY

Some of new models suggests that there is a black inside the earth's core which produce high temperature in the center of earth, magnetic field and gravitational wave of earth. However, these models ignore the role of this black hole in creation of life. We have generalized these models and introduced a duality between number of microstates of black holes and DNAs. We have shown that by compacting DNAs interior an small box with size 10^{-9} times smaller, a curved space-time is emerged and a DNA black hole or black string is produced. This DNA black hole could be seen in both cells and core of earth. Thus, these two systems can communicate with each other very well. Also, these DNA black holes or black strings could be new windows into extra dimensions. We have shown that by counting number of microstates of a DNA, we can determine number of dimensions. Also, by having number of microstates of DNA black string interior of earth, cosmic waves and number of dimensions,

we can predict time and location of earthquakes.

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