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## Spacetime quantization - multiverse

Autor : David Zoul

+ **Controversial comment** (Google translator used for translation)

The discovery of the accelerated expansion of the universe marked a fundamental change in our views on the behavior of the universe as a whole at cosmological distances and paved the way for new ideas and theoretical constructions. . [Brian Schmidt](#), along with [Adam Riess](#) and [Saul Perlmutter](#), won the [Nobel Prize](#) in 2011 for discovering the accelerating expansion of space.

Scientists have gathered a large number of observations that suggest that the effect of accelerated expansion, which we identified as dark energy, could be due to **the non-trivial dynamic properties of the vacuum**. **This would require a more detailed explanation related to quantum processes**. **What is the "quantum process"?** It could even be another unknown interaction - a new quantum field, which was professionally called [kointeraction](#).

Disruption of some spacetime symmetries in quantum theories of gravity **with the discrete structure of spacetime** **what is the "discrete structure of spacetime"?** It can ultimately lead to **a violation of conservation laws** **Why there are laws, I know, but why there is a "violation" of these laws I would like to hear an explanation from experts... (?) →**

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and the spring of energy as if out of "nothing", as we are witnessing in the case of dark energy. Just *"as if"*, because dark energy "springs" from the "foam" of the vacuum, so it is "born" because of the "curvatures of dimensions 3 + 3 space-time" on the Planck scales, where the curvatures are strong - boiling foam of dimensions and .. and for reasons essence of the origin of every matter (and fields) that this is the **"curvature of dimensions"** of space-time.

**Multiverse** - a multiverse, an assumption of some cosmological models or interpretations of quantum theory, according to which there can be a large number, perhaps even an infinitely many different separate universes.

**Anthropic principle** - the claim that the universe has exactly such parameters to suit man. If there are multiple universes at the same time, we live in exactly where life of our type could have evolved, and therefore we should not be surprised that the parameters of our universe are primed so that life can arise. A slight deviation from the values of the basic constants or other parameters would mean the creation of a completely different universe, where life could not exist as we know it. The name Anthropic Principle was first used in 1968 by Brandon Carter. The only scientific basis found so far is the multiverse hypothesis: there are many different universes, and life originates exactly where the conditions are. The anthropic principle has its rock supporters and opponents. Opponents generally argue that the anthropic principle diverts attention from the study of real initial conditions in space.

**Chaotic inflation** - one of the inflation scenarios that explains the characteristics of our universe. Chaotic inflation involves quantum fluctuations in the inflaton field (it can in principle also be created by the fluctuating micro-curvature of spacetime. This would require more interpretation. There is nothing about it on the Internet.) In the pre-inflationary phase of the universe.

My HDV is basically based on such an idea, the idea that after the big bang "there was a state of extreme curvature of 3 + 3 D space-time - foam of dimensions and in it the genesis (when alternating symmetries with asymmetries) begins to realize the structure of matter and fields and also and the sequence of laws. The basis of HDV here is the emergence of big-bang Is → the emergence of big-bang

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and then there are more and more thoughts on the topic of Big-bang on other websites.

What about Big Bang?

\*) [http://www.hypothesis-of-universe.com/docs/aa/aa\\_046.pdf](http://www.hypothesis-of-universe.com/docs/aa/aa_046.pdf)

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**What about Big-bang ?**

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The potential energy of the inflaton field  $\Pi$  is proportional to  $\Pi^4$  and does not contain local minima (false vacuums). **Chaotic inflation** was designed by the Russian physicist Andrei Linde in 1986 (**I "foam foam vacuum" in 1982, ie the foam of curved dimensions of two quantities : Length and Time**) and also proved that chaotic inflation can be persistent under certain conditions. With chaotic inflation, there are areas of space in which the field is strong enough and almost homogeneous, which is effectively generated by the cosmological term of Einstein's equations, which then causes gravitational repulsion in the De Sitter universe. **It is not proven experimentally or observationally and even mathematically this member is controversial.**

**Eon - epoch**, era, historical period. The word comes from the Greek aion and the Latin aeon. In conformal cyclic cosmology, it denotes the duration of one cosmic period between two big bangs. → **Hypothesis no less "smarter and more educated" than my HDV**

## Extreme manifestations of dark energy - Big Rip and inflationary universe

In the classical model of gravity - Einstein's general theory of relativity - the kosmologická konstanta corresponds to the energy and pressure of a universal quantum vacuum and is constant in space-time. In the kvintesenčním model, dark energy is related to a certain universal quantum field (dilaton field), which tends to some finite state.

Robert R. Caldwell (\*1962), Marc Kamionkowski (\*1965),  
Nevin N. Weinberg (\*1978)

Physicist Robert Caldwell of Dartmouth College and his colleagues Marc Kamionkowski and Nevin Weinberg z [Caltechu](#) added a third possible variant to the model = hypothesis. In the Caldwell **model** with so-called "*phantom energy*", which is an extreme form of [kvintesence](#) there is no stable vacuum quantum state **in the model = hypothesis** and energy density together with the pressure causing the universe to expand increase over time (in ordinary gases the pressure expands with gas expansion) . As a result of this cosmology, all the bonds that hold the systems together will break at some point before the end of the universe, and matter will eventually disintegrate - explode. → **Hypothesis, (poor interpretation) which is no better than my HDV.**

In the phantom-controlled universe model, the universe expands at an exponentially increasing rate. At the same time, however, it means that the size of the observable universe is constantly decreasing, the distances to the edge of the observable universe, **which is moving away at the speed of light, are getting smaller and smaller.** The model assumes that **after the "end time" end time is when?** occurs, the so-called "Big Rip", in which **all** **????** distances diverge to infinity. **Mr. Zoul probably thinks that the distance from us-observer to the quasar and to Mars will be "the same = diverged to infinity" (?), Zoul said that "all" distances from my shoe to his shoe....** This cosmological hypothesis **by Mr. Zoulem - autor** was published in 2003.. **My HDV was published in 2001** It deals with the final destiny of the universe, in which **there is cosmic matter** (created from Nothing in finite quantity and in the same quantity at the end of the Universe is said to disappear), galaxies, atoms and subatomic particles gradually **divided** **who / what divided matter? and divided the "who-what" into "what"?** accelerating the expansion of the universe at a certain time in the distant future.. **The hypothesis depends** crucially on the type of dark energy in the universe. The key value is the [parametr w](#)- the ratio between the pressure of dark energy and the density of normal energy. The authors of this hypothesis calculate the time from now until the end of the universe, according to the relationship

$$t_{\text{rip}} - t_0 \approx 2 / [3 |1+w| H_0 \sqrt{(1-\Omega_m)}], (1)$$

where W is a degree of repulsive forces of dark energy,  $H_0$  is Hubble constant and  $\Omega_m$  is the current value of the [parametru  \$\Omega\$](#)  for all mass in space. **Until now, the author D.Zoul did not say either a word of "space-time quantization", although it is the name of his work, it seems that the interpretation diverges from his intention. Perhaps it will be below** The authors point out that experimental evidence shows that W is actually very close to -1. In our universe,  $\Omega_m$  dominates. The more (1 + w) approaching zero, the more distinct (in time) is *Big*

Rip If the par parameter was exactly -1, then Big Rip could never occur, regardless of  $H_0$  or  $\Omega_m$  values.

For example, in a model scenario for  $W = -1.5$ , one billion years before the end. At the end of the passage of time? ... Why "ends" in this model ??? Individual galaxies will be so visible to each other. And when they are invisible to each other, it's the "endless space-time" that stopped running time ??? At the moment, when the same meets the stars in the galaxy, the universe will be only 60 million years old. At that time, galaxies will be compensated and no stars are observable in the night sky. Three months before the end, they break the planets from the Sun and spill into the interstellar space. In the last minutes, stars would be torn and only 30 seconds before the end will explode our country. Then things take a quick gradient. By this time, the author D.Zoul did not say a word about "quantization of space-time" and seems to diverges the interpretation from the intention

At the moment, when the universe is only  $10^{-19}$  seconds, molecules, atoms and then their cores are collapsed. And reason ? Because "stretches" the universe? Or because it "stretches" the distance of any points ??? In the last fraction of the second windows and individual quarks forming baryons, The reason for "flying" is not here. Because "Spread Length"? Thus, the length dimension Finally, there will be nothing but empty space. Without time ??? Yes? And why "empty"? Where did the galaxy disappear? The complete breakdown of elementary particles in the last fraction of the second existence of the universe causes the status of energy ~ mass in the next time it will be identical to the state (known as false vacuum), from which our universe has came from 13.8 billion years. In that case there are several questions. The first statement of Mr. Zoul was that "at the end" (space?) There will be space empty, but then it means that this "end" is not the same with the "beginning". The second question: When and how and where appeared = all matter ~ energy? "in the beginning" .The second question: When and how and where appeared = all matter ~ energy? "At the beginning" When one physicist (finally) read HDV, they will have to acknowledge that this idea is more attractive. The idea that the universe once gulped from vacuum thanks to the initial fluctuation and is now gradually returned to the basic vacuum state by making space foam bubbles (mass as we know it) will gradually crack, until the universe in the penetration is completely understood is extremely beautiful exceedingly praised, even sometimes I speak of HDV thought is extremely beautiful

Yes ..., but once, Lord, you know that the idea of HDV is even more beautiful ...; The universe failed from vacuum, but the mass "grew" from space-time - from vacuum foam 3 + 3 dimensions style "curves = collapse" dimension and length and time into club-geese-packages on pledge size scales Planck sizes ((( which is much elegant idea, Less fantasmoric than "strings of Nothing" in string theory, where they are also similar to these strings "curls and package"))) outside these packages (elementary particles of matter), the space-time started unpacking, so that very crooked 3 + 3 dimensional foam Spirits and the "specially" crooked states of space-time, which have acquired the character of fields, physical fields ... 4 to 5 fields were born; The rest of the space-time foam, outside, continued and continued to expand to the present form of intergalactic space, maybe even with the participation of that inflationary phase in the first seconds, what affected the length dimension ... and it is not excluded that transformations during the aging of the universe have also received "time inflation" (In another position other than spatial inflation), ie transformations, transformations !!! The tempo of the passage of time that may not be the same in different stages from the bang everywhere, and always the same as we observe it on Earth.

..the idea that the universe once fell out of vacuum extremely beautiful and easy simple - simple all **singularities**, yes ... simple, magical and simple is the idea of HDV: "Jump change" of the space before the bang on the state after the bucket ... from the state of absolutely Euclidian flat, infinite, without a mass, without the passage of time, without expanding with different non-accelerations ... on the state of extremely curved space-time - dimensional foam - whistling vacuum where "homogeneity" foam changes a) Packages = elemental particles and b) by dropping 3 + 3 dimensions on the field and then the "mixture of bogus of intergalactic space" ..., etc. → 10,000 HDV. With other Thezem, thoughts in HDV that crooked (collapsed) states of dimensions representing the mass (and their conglomerates - atoms, molecules, compounds, etc.) "float" in fewer curves fields and the fields still "float" in the base grid = raster Euclidian space-time flat **sudden points of turnover** and other oddly unnatural things. Yes, Singularity won't be a "sudden turnover" but possible location = our shaking universe in a non-medical endless Euclidian space-time, where the "location = our universe" can be any small = large ... Singularity = Skoronula = Skoronula ... Our universe "floats" in At the same time, the 3 + 3 d ratio at the same time offers space for subsequent **vacuum fluctuations**, **fluctuation of correctionation of space-time dimensions**\*, which can then give rise to a new universe from energy, noó, the universe does not arise from energy ... Energy is generated by "diameter curves" space-time ... etc. See HDV. This was left here after our current universe.

**According to this concept**, the universe never had to be in singular condition, (even according to the HDV concept, and was not in the singular state: it occurred - Jump - change in the state of the tongue space on the crooked state of space-time), but **due to quantum-gravitational fluctuations** spontaneously formed from a vacuum filled with virtual particles and the field. No, it's different. By the way: I still miss the interpretation "about quantization" .., ie "what", sir, "quantum"? Mass? Or time? And why do you quantize space-time? We-People - Observer on scale size somewhere nearly in the middle [http://www.hypothesis-of-universe.com/docs/c/c\\_017.jpg](http://www.hypothesis-of-universe.com/docs/c/c_017.jpg) We see = we observe on the plenary scales of the vacuum foam, which is continuous, but we eat We observe as ... as ... as "dilapidates" ...; Like...Jako field zero and one ....; as alternating "Nothing" and something "...; as ... as "quantums-balls" and "gaps". (here collected images for visualization to abstraction) → [http://www.hypothesis-of-universe.com/docs/c/c\\_016.jpg](http://www.hypothesis-of-universe.com/docs/c/c_016.jpg) ; [http://www.hypothesis-of-universe.com/docs/c\\_029.jpg](http://www.hypothesis-of-universe.com/docs/c_029.jpg)

Sufficient quantum fluctuations, similar to the birth of our universe, can occur elsewhere. There were a number of different independent universes. Such anticipated set of spontaneously emerging universes from quantum fluctuations creates a sort of "**fractal tree**" of new and new worlds. **HDV is more elegant and more realistic**. **If** there are such "multiple" universes, **then** what we have been called the universe, it can result only one large bang (or quantum fluctuation) from many others, similar to our sun just one of many stars arising in a similar way in the galaxy. For the universe, the place of the existing name "Universal" would be a more fitting designation "**Multiverzum**". **I enjoyed the term, the expression of**

**Vel-Universum**, and in his site "swims" then "our universe" ... like a swimming crooked states of space-time in fewer space-time ...

Obr. 1: Multiverzum jako „fraktálový strom“.  
Zdroj: Andrej Linde, Scientific American.

Quantum Fluctuation Vacuum Maybe everywhere and constantly "spews" new and new universes with a variety of properties. In alternative HDV visibility, it will result in a mass of its basic elements: quarks and leptons and bosons of vacuum foam as collapsed wavelobal dimensions dimension length and time, similarly unpacking bores, arranges ..., etc., as described thoroughly on others places of HDV. Thus, according to these concepts, the entire universe appears as a blowing "foam" yes, even in HDV as foam 3 + 3 dimensions that are expanding = expanding dimensions "Bubbles" - separate universes, each followed by their own laws of physics. Well, it's a lot of bold think we're one of some universes, and every other universe has its own laws of the universes live "their own life". Just hypothesis tumbled our whole visible universe is just a small area in one of these "bubbles". But very little "bubbles" has physical and geometric properties suitable for creating more complex structures - galaxies, stars, planets and finally life. Which properties are suitable and which not? Lord Zoulo? In light similar concepts, it shows who shows and what it advocates ??? Lord, so far (here on the seventh page) still speculation still speculation that traditional (and it would seem that a matter of course) a cosmological requirement that the multivormir as a whole during expansion becomes homogeneous and isotropic, is not necessary - it is enough to show these properties "Mini-space-times", or at least the metagalaxy in which we live.



The emergence of the universe from "nothing" may seem strange and unacceptable, contrary to all our knowledge. O.K. However, the definition of "nothing" is different here from the usual meaning of the word. In quantum physics, "nothing" = "vacuum" means space, = space-time in which elementary particles constantly begin and end their existence in vacuum fluctuations for short moments. Oh, then according to this definition (non-speculation) if matter arises "out of nothing", it means that it arises from the dimensions of space-time... and it is already HDV. In a kind of "space-time foam", in the throes of vacuum fluctuations, tiny submicroscopic "universes" If these statements apply, then the idea is that the material elements also arise "in space-time foam" by packing = packing dimensions. The vast majority of these emerging "bubble" universes immediately collapse and disappear, but according to the laws of quantum probability can here and there there is a large fluctuation that is capable of further development - inflationary expansion. In addition to "our" universe, other universes can also arise ?? in a topologicky different space. However, these are still only speculations and therefore the wish of man's wish that it be so. In order to create other universes besides our universe (which is confirmed)

The inflation scenario of a very early universe solves, so to speak, "one blow" some of the most important problems of contemporary cosmology: Why is the universe so perfectly homogeneous and isotropic on a large scale, why is the average density of matter in space so close to critical density? (Also, a scenario other than "hurray-inflation" could create a homogeneous and isotropic state of the global universe. [Http://www.hypothesis-of-universe.com/docs/c/c\\_239.jpg](http://www.hypothesis-of-universe.com/docs/c/c_239.jpg) ) "inflation" could create a homogeneous and isotropic state of the global universe. with a spectrum suitable for the formation of observed galaxies, and why the universe is not filled with magnetic monopoles and other "exotic" particles. Why ? There were no magnetic monopolies and "exotic" particles that were not in the universe, there could be other reasons than "hurray-inflation"! (?) And if the global universe is exterminated at the observed large scales, it does not mean that it must be exterminated at the small scales.

In cosmology, until now, most of the observed properties of the universe (homogeneity and isotropy, initial expansion rate, scale of inhomogeneities for galaxy formation, entropy per one baron, etc.) have always had to be "built in manually" into the model as initial conditions. In the inflační model, however, the initial conditions are irrelevant, because inflation expansion effectively "erases" all the details of the universe that was before the inflation phase. Inflation has blown up "straightened" the global curvatures of space-time, which were in a foamy state after the Big Bang, in space-time foam, but it does not straighten out already implemented packages-balls of space-time, which were already realized before inflation and remained with "the clones" represent the mass elements of the Standard Particle Model. Inflation "straightens" the space-time grid 3 + 3D, in which more crooked states of space-time such as fields still float. Avalanche-growing expansion almost perfectly smoothes the universe. However, it does not smooth out structures = wave packs that have already "frozen" before inflation as elementary particles, ie as packs of coiled dimensions. According to the inflation model, the current structure of the universe is not the product of some unknown initial conditions, but is solely the result of the fundamental laws of physics - the laws of quantum field theory, including the gravitational one. Thus, for the first time, we encounter a physical theory that, in addition to the dynamics of evolution, solves (or rather circumvents) the problem of initial conditions. Which "conditions" bother cosmologists and which do not know! Where "came from" ??? And what conditions do cosmologists need and what does the Universe need ??? Into which box do the "conditions" for the formation of matter fit? Mr. Zoul, do you know that?



If each universe began (and ended) with a physical singularity, it would differ in probability as close to one, rather substantially substantial, universe from the parent universe. You are already inventing the differences between the Mother Universe and the daughter Universes without knowing whether the daughter universes are confirmed at all. (As you would do with the devils in Hell why the common devil must have small horns and Beelzebub the big curved and why some who do not have a tail have only one horn) However, as we showed in the third part, (showed the assumption) the singularities of spacetime do not exist.. Therefore, the condition is met at the same time ... So if I come up with the assumption that singularity does not exist, then of course there is no other condition, does it exist? (If the devil doesn't have a tail, he can't have two horns, logically, because he has only one horn, and he has it because the physicist thinks so in the Hell model) to preserve all the information of the parent universe for the daughter universe. In order for the universe to arise, from Nothing ??? in Planck's time, the energy density in de Sitterov volume from which the universe began its expansion must have been supercritical. Are you saying, Mr. Zoul, that the existence of energy preceded the very origin of the Universe? what? But that's how you put it here. !! Ie. the universe came into being from the very beginning as closed. Our Universe after Bang originated as a "closed site of boiling foam of dimensions" "floating" in the infinite flat Euclidean two-magnitude space-time in front of Bang. (Bang is a step, extreme, change in the state of dimensional curvature.) As long as the energy density of the false vacuum in de Sitter's model is subcritical, there will be no quantum production of the universe (chaotické inflaci) at all. Supercritical density is therefore a necessary and at the same time sufficient condition for starting the process of chaotic inflation. During inflation, then, all the matter in the universe is gradually quantumly produced. Really? So it's a blow to the fight. And from what is all matter produced in "quantum" in times of inflation? so that its confinement is maintained throughout the period of inflation (a function describing the dependence of the probability of spontaneous mass creation from the vacuum oh, this is an interesting suggestion. 3 + 3 dimensions of space-time itself, then we can agree because this is already my HDV with spontaneous creation of elements of matter by packing dimensions into elements having the character and properties of matter ..., depending on the energy density of this vacuum, and you have already spoiled the spirit of common agreement has the character of a very sharp decreasing exponential depending on the energy density).

However, after the end of inflation, the probability of further quantum creation of matter is already very small. ? Why ? In your country, is matter born only in times of inflation? The energy density of the vacuum is constant over time, so in a boiling vacuum (quark-gluon plasma .., separate wave packets, which then "condense" or connect to hadrons..., etc., see QM) so on the Planck scales of energy is constantly generated, because unwrapped space-time and thus vacuum foam. The reason is precisely the "curvature" of 3 + 3 dimensions of space-time - in principle. Every curvature of space-time is mass-created. Continued accelerated expansion of the universe is then possible only if some other form of energy grows exponentially in the universe yes, the energy of the "boiling vacuum" increases space-time, which is always curved on the Planck scales, and because every dimensional curve is mass-forming - dark energy - which causes another exponential ?? expansion, at the end of which a so-called big rip can occur.

So far, Mr Zoulo has not given a word on the basic topic of his lecture: "how is space-time quantized and by what?, And why is space-time quantized"? : Is it worth noting that the probability of quantum mass production What is it? Quantum production? what is it ? in space, (quantum production) is governed by Linde's chaotic inflation is governed by an exponential density function, production is governed by a function ??, it follows the

exponential function of density, production is governed by the function ?? and therefore never drops to exactly zero. According to this **model**, (**your model, Mr. Zoul?**) there is a certain non-zero **probability of new matter emanating directly from the vacuum even in the current universe**. (!) **Probability** comes from a vacuum, Mr. Master?, or does the mass spring from the vacuum? Yes, from a 3 + 3 dimensional vacuum that "boils", it is foamy, ie from a vacuum that shows foam of curved dimensions... and each curvature of dimensions is mass-forming resp. is the state of the fields. Absolutely flat space-time, Euclidean does not contain matter, it exists only before Bang. That is, from a vacuum that "boils" is foamy, that is, from a vacuum that exhibits foam of curved dimensions... and each curvature of dimensions is mass-forming resp. is the state of the fields. Absolutely flat space-time, Euclidean does not contain matter, it exists only before Bang. However, this probability is so small that it can be set equal to zero for all practical purposes. **Why ?, And the reason?**

Andrej Dmitrievič Linde (\*1948)

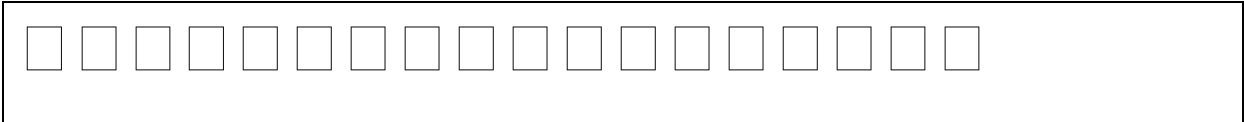
**In cosmic energy inflation, matter emanates from the vacuum and clusters into structures. Why only in times of inflation? reason? and proof ?!** With a large "burst" at the end of the universe (if  $w < -1$ ), the opposite process occurs. All the matter will probably dissolve and return its energy to the vacuum. **In order for matter to "dissolve" into a flat vacuum, a flat spacetime, it would have to "untie from those curvatures of dimensions", the curvatures of dimensions within the packages of elementary particles would have to **e x p a n d**** There are several factors at play at the same time:

1. The positive mass of all particles was initially precisely compensated by the negative energy of their mutual gravitational bond, so the total energy of the universe must be zero.
2. During expansion, the potential energy of the universe increases, but at the same time the energy of relic radiation reliktního záření. decreases. It would be exactly the opposite when the universe shrinks.
3. No experiment has ever shown that, due to the expansion of the universe, any matter is still springing spontaneously from the vacuum. **Matter ceased to form in the universe immediately after the end of the phase of chaotic inflation. chaotické inflace. It is possible (!)... In the boiling space-time in which the first phase was born: the quark-gluon plasma, the configurations eventually "froze" to the state of elementary**

elementary particles - the standard model. And they remained "clones." They partly "intertwined" on atoms, then molecules, etc. ie a few moments of Planck after time began to flow in one significant direction. O.K. maybe yes, after the **antiparticles** have been "packaged" with the time dimension curve "left" and the **particles** have been packaged with the time dimension curve "right". My assumption.

Because **virtually no new** matter is being created in today's universe? practically means what? So something little arises, right? Well, no one knows... **due to the "unfolding" of the global curvature of space-time .., which "floats" new curvatures of space-time from the Planck scales... it can not be clearly demonstrated or refuted** and therefore the loss of radiation energy during space expansion cannot be compensated as this happened during space inflation, **and because, according to general relativity, energy is really being lost from space ?? on a global scale, it may be lost, but in the microworld of Planck scales, "vacuum boils", ie energy is "born" there** as the wavelengths of photons are constantly increasing (radiation has already cooled from the original Planck temperature to today's 2.7 K), dark energy **temná energie**, that is, **the curvature of dimensions on the Planck scales** as a **natural solution** to this problem. With accelerated expansion, the energy of the electromagnetic field decreases even faster, and thus the dark energy increases, O.K. which actually feeds itself. At the same time, the electromagnetic field is not the only thing that waves in space, and over time it can lose energy (**by decreasing the curvature of dimensions**) and thus feed voracious phantom energy. This positive feedback could lead to an avalanche effect in the future, which will end in a catastrophic **rupture of the "fine web" of spacetime**. **"Bursting" of the smoothness of space-time into "lines" of dimensions ???** And where will matter not know which "line" is to stick to, right? Apropos: And what was the quantization of the "fine fabric" at all? When did the **"tearing"** take place? And did it happen at all? When, Mr. Zoul?

Part of the original vacuum energy is now in the form of ordinary matter. **"Boiling vacuum"** is a crooked, very crooked space-time, an environment of curved 3 + 3 dimensions, and by its nature every curvature of dimensions is mass-forming and therefore "your vacuum energy" is a "form of matter", it is a state of "chaotically floating packages that start to behave according to rules and laws into interaction equations, in reality into interaction interactions... etc. And how did it happen? Mr. Zoul, what do you say is your interpretation of theory or your private opinion ?? But as the universe expands, matter thins and the energy of the vacuum grows proportionally again **Yes, agree, because the vacuum at the level of the Planck scales is still foamy, ie it is the space-time of curved dimensions and... and the curvature of dimensions is the principle of mass construction expansions. I'm against accelerating expansion** In the end, there will be no ordinary matter left. Stable particles will be torn **which theory "tears" elementary particles ??** and only the virtual ones will remain, which in **the form of local fluctuations of the metric = boiling foam of dimensions emanate from the vacuum. I don't have our own explanation to whether "today" in the vacuum is born only virtual steams and not other elementary particles, but after a big bang, it was and then disappearing again.** However, if any other local fluctuation occurs, which exceeds its de Sitter horizon, **another messy inflation occurs and the fake vacuum during it again a grub common mass**, Aha, so it can be considered that **"local fluctuations metrics = The blending vacuum dimensions "born mass elements by collecting- vlubíčkování dimensions of space-time as we know it.** Vacuum energy in the appropriate area, of course, again proportionally decreases and this cycle is still repeated.



In the quantum theories of space, space and time of discrete quantum structure. Noting something is not theory. And even explanation of the claim "foamed space-time", ie space-time with the structure of the curves dimension, it also has a "quantum structure from the world macro". The elementary atoms of the space form the cellular network, it is again only the announcement of without the support of evidence or theory; If a smooth continuous space (3d) curl, to a lot of curl, "curves" into the mold "foam", it can be declared from the perspective of a macrometer that the 3D space is "quantized". From the point of view of macroscopic appears "foam" as a network of points and spaces, as leader and zeros, such as "something" and "Nothing", it is a rotation of "densities" and "dilutions" → This is "quantized space" in which individual Partones (? What is it?) They can only occur inside the cells, ie in discrete areas. his is only a statement as a statement as a **hypothesis = quantum the theory of space - time** with the space itself "quantum" into "cells 3D" and there are partones in space cells. This is only a statement as a statement as a hypothesis = quantum the theory of space-time with the space itself "quantum" into "cells 3D" and there are partones in space cells. This is not the theory but only and only hypothesis. How are we stressed ?? In the previous works of our series, the series of science or Paddy ??, or it is a worse / better hypothesis of the HDV. Elementary particles (perhaps the author wanted to say partones or space atoms?) There are no more continuous in space. If the elementary particles of the standard model and the and OK, they are packs coiled dimensions that "float" in fewer curves 3 + 3d space-time In order for them to move in space - to flow from space cell to cell, from voxel to voxel (probably the partons) - they need to be constantly renewed Whom to renew?, Partones, or elementary particles must be renewed I hear this for the first time., With some refresh frequency, like the screen points. It makes "dimensional mousse dimensions" 3 + 3 space-time. The fastest particles can be poured from the cell into the cell at the rate of light, which will take precisely plancy time (more accurate formulation of this statement will be discussed in the final part of our series). Inside the space-time generated by such a grid. If I understand, I ask again: Smooth space-time has "local cells - quanta" by the author ?, Yes? (and in them partones?); And the cells of "quantized space" "within space-time" have a grid ?? It occurs essentially the illusory effect that the universe is expiring. In fact, however, only the size of the elementary cell is reduced. So it's theory or hypothesis? I'll ask experts about how much the hypothesis is more scientific than another hypothesis? eg HDV?



In order to in the area , ie from space, new cells are created (expand space itself), a gradual increase in dark energy is needed. etc., and well-bla.. It is more elegant, the vision that foamed space-time after the bang starts to expand until today's state of countless "sites" with different borrowing throughout the universe (because the gravitational field is locally curved 3 + 3d space-time) when we look four-dimensionally, ie Perspectors Spin foams (WIKI: Spin foam refer to the topological structure ... two or three dimensions ... etc.) Its shape is firmly determined - it is unchanged. Only when moving along the timeline, the number of cells on the selected time plane is constantly increasing. When expanding "curved-crumpled space-time, as if they stretch the intervals on the dimension ..., that? From the perspective of the spin foam, the universe reminds of a funnel. Surely the attentive readers did not escape that we did not define yet on what Planck cells are actually diminishing. I'm one ear. In fact, I actually determine the scaled using Planck Lengths in the universe. If the number of Planck Lengths = the line between the two measured objects with time increases, then these objects are efficiently driving away. And if the Planck's "extends" means that the dimension on which the line was chosen

and ... and the dimension is the same as "straightening" the **curvature** in the foam, the crumpled space-time, foam when you straighten, so it will be The observer appears as expanding dimensions. And it does not matter whether we say that we only shorten our benchmarks, or leave the scale with constant and expand space. Behind, in other words, it is the same as "dropping" "crumpled dimensions". A is one whether we say that we only shorten our standards, or leave scales constant and expand space. Underly, in other words, it is the same as "dropping" "crumpled dimensions". This two statements are equivalent to each other, as a different retention point than Planck's length = line (length is not a line. Length is either a quantity or dimension that can be determined plankck The interval) we do not, and therefore it is not to apply to its possible time changes.

He argues in favor of the concept of a "big burst", among other things, by analyzing **the time dynamics of the event horizon**. Um ... time dynamics? what is it ? For me, it would be that **time changes its pace of flow** .. even from the observer's place to the observed objects and during the aging of the universe. **With the expansion of the universe** beware: the universe is not the same as space-time \* the horizon of events occupies an ever smaller part of the total universe. [?] With the exponential acceleration of space-time expansion, this effect would become increasingly dominant. The event horizon would shrink to the size of a cluster of galaxies, then galaxies whose stars would scatter into **expanding space**. beware: the universe is a different matter than space. In the final stages of expansion, the horizon would shrink sharply to the dimensions of the solar system, stars (Sun), planets. ? All these bound systems would disintegrate and "fly away" from each other. [?] **I have no desire to engage in controversy**. In the end, the horizon would fall below the dimensions of the elementary particles, which would also be torn. Even such stable formations as black holes would eventually be destroyed. **I have no desire to engage in controversy**. At Planck's last moment, **Planck's time is an interval, not a "moment" as a stop-state in the history of the universe or a stop-state in the time dimension, Mr. Zoulo!** the negative pressure of an **exponentially expanding vacuum** would literally suck the last remnants of energy out of them, and they would also explode. **What is the difference between space inflation and exponentially expanding space, Mr. Zoul?** Immediately, the space-time metric in the discontinuity of the metric tensor  $g_{\mu\nu}$  would disappear. The amorphous variety formed in the topological foam could then, perhaps by statistical fluctuation, re-create an inflation-expanding region, which would give rise to a new universe. **I have no opinion**

### **Escape from the end of the world by a wormhole (and we are already on the plane of speculation)**

In the third part, [třetí dílu](#) we became acquainted with the Einstein-Rosen bridge, which in Schwarzschild's geometry connects two spatially separated regions of the universe (essentially two parallel universes). \* **Nothing more than a fictional hypothesis**. We have also shown that nothing that moves faster than light can cross the Einstein-Rosen Bridge.

However, Schwarzschild's solution represents only the simplest case of solving Einstein's equations of the gravitational field, which is moreover physically very unrealistic. In this section, we will now examine several more realistic geometries. **Hm..** We start with a black hole, which in addition to its mass  $M$  also carries on its surface a non-zero electric charge  $Q$ . Such an object is described by the so-called Reissner-Nordström geometry. ??



I will probably skip this part of the interpretation without comment, I did not notice the intention of the interpretation →

In Reissner-Nordström geometry, there are two "horizons" where the metric is not regular - the "outer" horizon  $r = r_g +$  and the "inner" horizon, the so-called Cauchy horizon  $r = r_g -$ . The outer horizon  $r_g +$  has a similar meaning as Schwarzschild's sphere in Schwarzschild's spacetime - it is the horizon of events, causally separating the inner area from the outer one. In the presence of an electric charge, the gravitational radius  $r_g +$  is smaller than  $r_g$  in the Schwarzschild case. Under  $r = r_g +$ , the light cones are turned inwards towards  $r = 0$ , and it would seem that every object that gets there will necessarily end in  $r = 0$ . However, on the inner horizon  $r = r_g -$ , the light cones begin to straighten again - there is thus a possible motion of the particle so as to avoid the center  $r = 0$ , where, according to the prediction of general relativity, the physical singularity would lie. However, it cannot get across the outer horizon (ie the horizon of events) back to the original spacetime, but necessarily to the "other universe" that lies with the original in the absolute future.

The singular behavior of the Reissner-Nordström metric in standard coordinates on these horizons is again only apparent and can be removed by moving to more suitable coordinates similar to Kruskal's. The geometric structure of this complete extension of the Reissner-Nordström solution is unexpectedly complex. An infinite number of periodically recurring universes appear here. ? In the third part, we have shown that quantum theories of spacetime exclude the existence of physical singularities, **to show does not mean to prove or justify** ie point or multidimensional objects of infinite density, replacing them with Planck density objects of finite, but still completely extreme. For all practical purposes, therefore, we can still refer to them as "singularities," because the encounter of any physical system, with the exception of the elementary particles themselves, with such an object will inevitably lead to its total destruction. Quite analogously, as when encountering a real physical singularity. To distinguish these Planck objects from real physical singularities, we will continue to write them in quotation marks.

In contrast to Schwarzschild geometry, where the "singularities" are of the spatial type (and thus inevitable for every object in area B), the "singularities" of the Reissner-Nordström geometry according to FIG. 2 time types - they are, so to speak, "time-limited" and can be avoided in principle. An observer who penetrates the outer horizon  $r = r_g +$  as he moves through Reissner-Nordström spacetime can no longer return to the original outer space (area A1) and has essentially two options: First, to reach "singularity", where his worldline therefore, its existence within the considered variety) will definitely end. However, this is not inevitable (unlike Schwarzschild's spacetime), the observer can avoid the "singularity" and move on until it appears in the second asymptotically planar region A2, in the second universe, which lies with respect to the initial A1 in the absolute future.

← I will probably skip this part of the interpretation without comment, I did not notice the intention of the interpretation



Giant. 3: The observer O moving in the outer asymptotically planar region A1 of the Reissner-Nordström spacetime has three possibilities. Either it will constantly move in A1 (solid line), so in the limit it will get to  $I^+$  or  $J^+$ , which represent the asymptotic infinity, which has been converted to finite coordinates by conformal transformation. However, if the observer penetrates below the horizon  $r = r_g^+$  (dashed trajectory) into the inner region B1, he also passes through the inner horizon  $r = r_g^-$  into the region C1, where he has two possibilities: either he encounters a "singularity" (dotted path) where he is absorbed and destroyed, or it can avoid the "singularity" (dashed trajectory) and reach another asymptotically planar outer region A2. The situation in this next universe A2 is not entirely determined by the initial conditions on the Cauchy hyperfield S, as can be seen, for example, in the point  $P \in A2$ . A real material object, moving in Reissner-Nordström geometry, can in principle travel between universes without having to go through a "singularity" (unlike Schwarzschild geometry, where the Einstein-Rosen bridge could only be passed at superluminal speed). If the body that is the source of the gravitational field rotates, the already excited external gravitational field will not be centrally symmetric, but can only be axially symmetric (if the mass-energy distribution in the rotating body is symmetrical with respect to the axis of rotation). Roy Kerr found an exact solution to Einstein's equations (in a vacuum) for such an axially symmetric case in 1963. Kerr's geometry describes the external field of stationary rotating objects, especially black holes. For a rotating black hole, Kerr's geometry is an exact vacuum solution of Einstein's equations. As in Reissner-Nordström geometry, there are again two horizons - the outer event horizon  $r = r_g^+$  and the inner (Cauchy) horizon  $r = r_g^-$ , on which Kerr's metric is pseudosingular. To reach the horizon, each object needs an infinitely long coordinate time (but a finite interval of its own time) and also an infinite angle ( $\varphi \rightarrow \infty$ ) - due to the entrainment of inertial systems by momentum, it must make an infinite number of orbits around the horizon. A transition to Kerr coordinates ( $v^+, r, \theta, \varphi^+$ ) is used to remove this coordinate pseudosingularity (ie to analytically extend the metric across these areas). This transformation performs an infinite "compression" of the coordinate time  $t$  and an infinite "expansion" of the angular coordinate  $\varphi$  around the horizon. The metric then has a form in Kerr coordinates, which is already analytical to  $r = r_g^+$  and  $r = r_g^-$ . It turns out that in Kerr's spacetime, "singularity" has not a point but a ring structure.

← I will probably skip this part of the interpretation without comment, I did not notice the intention of the interpretation

Giant. 4: Cross section of Kerr's black hole with ring-type "singularity". Static limit means a surface in the shape of a rotating ellipsoid, surrounding the outer horizon of the Kerr black hole and separating the area where space is still possible in principle against the direction of rotation of the black hole, from the area - the so-called ergosphere - where such motion is not possible. Everything (including light) is forced to rotate together with the black hole - Kerr's geometry rotates here together with the black hole. This solution was later further generalized by Ezra Newman for the case of the presence of an axially symmetric electromagnetic field excited by a rotating axially symmetric source having an electric charge, which is also axially symmetrically distributed. The geometry of spacetime around such an object is called Kerr-Newman geometry. It is in fact a combined Kerr and Reissner-Nordström geometry.

← I will probably skip this part of the interpretation without comment, I did not notice the intention of the interpretation

The global geometric structure of Kerr-Newman spacetime is analogous to that of Kerr geometry described above. Thanks to wormholes leading to other universes, there is a way to escape the final destiny of the universe. From the solution of Einstein's equations for the curvature of space-time in such conditions, it follows that through a wormhole it is in principle possible to escape into the future eon, as we will show in a moment, and thus avoid the extreme end.

← I will probably skip this part of the interpretation without comment, I did not notice the intention of the interpretation

## Cosmological consequences of spacetime quantization

The author is already approaching the interpretation and explanation of \* "consequences" \* quantization of space-time, but so far he has not presented the reasons, methods or purpose of quantization of space-time on 16 pages of interpretation. (he did not show the reasons or ways or purpose of quantization of space-time). In the paragraph marked with the pictogram of the index finger of the left and right, the author tells about the "atom of space", but fully explains and does not clarify about the cells of space about the parton in the cell; clarifying the idea of cells, neither experimental findings of cells nor the method of quantization of flat space, nor what it is done, nor the reason and meaning of "quantization" of smooth flat Euclidean 3 + 3 dimensional space-time. On 22 pages, there is a half-page passage of the interpretation with a non-fat unsolicited conversation and a statement about : *that "we have quantization. And if we have him, we'll call him Beéda " ..bla-blah*

## Cosmological natural selection

Ashtekar 's former doctoral student Martin Bojowald, of the Max Planck Institute for Gravitational Physics in Potsdam, showed how a spin network could ignite a big bang. Ullmann explains "space quantization" in a complicated way, as follows : *spin is the rotational momentum - the Hilbert space of the quantized calibration field SU (2) can be generated by so-called spin networks based on twistor theory*

*\*) These spin networks are taken as basic fundamental elements ((this still not packages of the network)) in loop theory creating a structure of space that thus becomes discrete. It can be imagined as a kind of "skeleton" or "kit" of one-dimensional fibers (graphs). The spin network does not exist in some space into which it would be nested, but the space itself creates (or creates what we perceive as space on a larger scale). At the submicroscopic level, space is no longer homogeneous, but has a fine-grained structure - it consists of countless interconnected "rings" or "loops" of Planck's dimensions. ((on this dimensional level is wavy, ie grainy, it is a foam that seems to be a projected quantized))*

*\*) In our book, the Twistors did not. The author of their importance is not convinced ... otherwise we used and discussed a number of other ideas and concepts of excellent relativistic physics R.Penrose.The evolution of the spin network over time creates a kind of*

*"spin foam" that can be related to the above-mentioned quantum approach of Feynman orbit integrals.*

I do this explanation and description> Spin networks <+> Hilbert space <+> twistor theory <I do not understand the depth. Only intuitively perceive, and **I think my primitive HDV** interpretation of space-time in the foam dimension, is the **same** as the same, so the interpretation of that the foam (spin foam) is born - coiled packages (Ashtekar, Penrose, Bojowald, Ullmann tells them "ring-loops") which I have been present for **30 years** as mass elements + their properties such as charge, weight, spin, etc. ....; This "folk, specific" interpretation is not far "mathematical-physical" interpretation of Ashtekar, Penrose, Ullmann on the state of the universe on a large tip → vaming vacuum, the spherical diameter foam. And I add to their ideas to their ideas, I add the candy-cherry to the cake that in the "twistor-spin foam" is born "clones = frozen configuration of collapsed dimensions" and it is already mass, elements of the standard particle model of moving packages of those Dimensions of length and time that will be mass. I'm moving about this achievement than they are with my spin network.

Martin Bojowald deals with Ashtekar's formalism applications on quantum cosmology and "singularity" in space. However, there is a lot between the large bang and the inside of the black hole. [http://www.hypothesis-of-universe.com/docs/c/c\\_409.jpg](http://www.hypothesis-of-universe.com/docs/c/c_409.jpg) Lee Smolin expressed the hypothesis that "singularity" in a black hole is a "big bang" from which a new universe is born, the descendant of the original. And thanks to the estimated "mutation", the laws of evolutionary biology can be applied.

When it is considered to concentrate the mass in a certain way, a black hole, whose space geometry corresponds to, for example, Reissner-Nordström, or Kerr solution, or their combination (Kerrova-Newman geometry). Author D.Zoul says that the act of "concentration of matter" creates a black hole, which is not so important, but "new space-time geometry" is also evident. Here, too, it is seen that it **is related** to "the shape of mass-shaped geometry". All these Einstein equations of the gravitational field contain wormholes, as tunnels connecting the different areas of our universe (so-called multiple space connections) and even into the universes of others. The total energy of any universe (and that our) is zero, so the quantum wormhole **can** expand in the other end to the giant universe, such as ours, **without being violated by the law of Law of Preservation.** There is still an interpretation of hypothetic ideas. Incidentally, the laws of the conservation will break. : In the universe, there is no volume, in which the "law conservation" is permanently true, rather! equation alternated by inequal. According to my considerations in the universe there is a law of alternating symmetry with asymmetries, without which the genesis of the universe would be.

[http://www.hypothesis-of-universe.com/docs/aa/aa\\_004.pdf](http://www.hypothesis-of-universe.com/docs/aa/aa_004.pdf)  
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[http://www.hypothesis-of-universe.com/docs/r/r\\_002.doc](http://www.hypothesis-of-universe.com/docs/r/r_002.doc)  
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[http://www.hypothesis-of-universe.com/docs/eng/eng\\_002.pdf](http://www.hypothesis-of-universe.com/docs/eng/eng_002.pdf)

[http://www.hypothesis-of-universe.com/docs/g/g\\_073.pdf](http://www.hypothesis-of-universe.com/docs/g/g_073.pdf)

[http://www.hypothesis-of-universe.com/docs/g/g\\_062.pdf](http://www.hypothesis-of-universe.com/docs/g/g_062.pdf)

[http://www.hypothesis-of-universe.com/docs/g/g\\_039.pdf](http://www.hypothesis-of-universe.com/docs/g/g_039.pdf)

What is of that worm holes primarily "blows", is de facto only the space itself. Matter in it (in space-time) appears as a result of the laws of maintaining total energy (ie resting and binding) in quantum fields.

It is the opportunity to "blow down" the new universe through artificially or naturally created wormhole leads to a very tempting idea that subsidiary universes can inheritance inheritance inherit their physics. This has led to the formulation of interesting hypotheses called cosmological nature selection, pronounced in the 1980s Lee Smolin, but also other authors, independently. This hypothesis essentially says that universes whose physics allows the emergence of a large number of black and horses and worm holes, are also extremely favorable to the emergence of life. They have a sufficient dense mass that must not be very great, as they would then have too short life, and thus lack of time for creating a large number of worm holes. They must also have exactly 3 large spatial dimensions and one time, etc. **Still just fairy tales, boachotes ...**

Only the universe, which has the highest "fitness" in the Darwin's sense of this word, ie the supreme ability to breed offspring and transmit their "genes" - its physics - subsidiaries, has consistent circumstances at the same time great potential to create life. (**It's a phenomenon against the entropy that sir Zoula ?**). This leads to the assumption that although the physics of just our universe (in the tangle of wealthy opportunities that the universe could choose) very little likely), this model can still be the most widespread in multiver, as it leads to the highest number of identical, or very similar copies. And just this model (or even a few of its subcocias) is the only compatible with the emergence of biological life (compare with [anthropic principle](#)) [antropickým principem](#)).. **Compare to the pyramidal idea of the development of life in the universe →**

[http://www.hypothesis-of-universe.com/docs/aa/aa\\_037.pdf](http://www.hypothesis-of-universe.com/docs/aa/aa_037.pdf)

## Conformal cyclic cosmology

When astronomers examined the map of the relict microwave background of the universe [reliktního mikrovlnného pozadí vesmíru](#) (CMB), they discovered an unusually large area that was colder than the surroundings. So the science was familiar with the famous cold spot (Cold Spot), which won the reputation of a mysterious phenomenon, preaching to the existing explanation and assumptions. Although standard inflationary theory predicts that hot and cold spots of different sizes are produced in the young universe, but the cold spot is strikingly larger and cooler than it should be. It is not only colder than the surroundings, but it seems that there is an almost empty space of about 10,000 galaxies. This cool place is the largest known structure and contains about 20% less mass than they should have according to all assumptions.

**Ruari Mackenzie and Tom Shanks** from the Mimogalactic Astronomy Center at the UK Durham University expressed the hypothesis that a possible explanation of the cold space

could be a collision between our universe and one of billions of others that affected the deployment of galaxies in the place of rainfall.

The cool place is about three billion light years from the ground. While the average temperature of the microwave background is 2.73 K, ie -270.43 ° C, the cool place is about 0.00015 degrees more cold. In the scientific world, this study aroused, whose results published by Monthly Notices of the Royal Astronomical Society, considerable attention. However, another three suspected circular tracks were discovered by 2008, while the temperature of one of them was above average. More information can be learned, for example, in Bulletin Miroslav Havránka : [We live in a space bubble? Žijeme ve vesmírné bublině?](#)

In 2010, a well-known British mathematical physicist [Roger Penrose](#) concept, according to which the universe enters the future exponentially accelerating expansion to the Big Rip method, at the end of which only intangible particles are left - ie. Particles for which time is not defined (remember that according to special relativity is photon in its system at all places at the same time). **When the universe loses the opportunity to measure its own time, the universe itself does not measure itself. The flow-flow of time is the reality only after the time dimension moves an object that smires "on the dimension of time" intervals. In the opposite guard of interpretation, the time stops in situations (local or already global) when the pallet of unequal bogus dimensions of time is extended - dimensions of time will be flat. (Its entropy [entropie](#) reaches the absolute maximum = timest dimension will be expanded into flatness, ie into "straight lines" and won't be able to grow, as it will no longer be defined arrow of time OK; in space-time 3 + 3 that has all six dimensions Expanded, flat time does not start because "after it" does not "what" run. Unpacked "There" will also be packages of elementary particles )** Of course, the particles and, of course, distances, moves continuously (so-called [conformal transformation](#)) into the so-called new eot. [eónu](#). This transition appears to effectively as **a new big bang**, I understand. Although the sequence of creation and terminations of universes (maternity to subsidiaries and vice versa) I do not believe, I understand that the "old" universe must get into the final stage which is in the state of absolute smoothing of 3 + 3d ..., then occurs a new big bang = change status Prevented to the subsequent, changing the flat Euclidian infinite space-time on an extremely crooked state of 3 + 3 space-time dimensions, and after the Bang **a**) as a site drowned in the pre-big-bang infinite state or **b**) after the bang changes to a new crooked state "all endless space-time") and ... And in Penros cyclical realism, the new similar genesis probably was the "our", **our** universe. With the difference that the universe does not pass in any physical singularity, so it can be more principle over it until the previous EONU. ??? Observation in relict radiation, which we now attribute the effects of inflation, whom the universe has undergone in the first fractions of seconds after a large bang, they can actually come from our Eore, but from the final tear at the very end of the earlier, ie. from the period before a big bang. **If this \* fairy tale \* scene is true, then there is one "Bangs" leap from total flatness to total extreme curvature dimensional dimensions.** In particular, the observed inhomogeneity at the temperature of the reluctant radiation, which, according to inflationary theory, represent primary germs of future galaxies and galactic cavities, according to Penrose remains after final explosions of black holes at the very end of the previous Eore. **It was a passage of interpretation of cyclical transitions "terminated" universes into new "eons", but ... but there is still the main idea of this session, ie.** **Interpretation** of quantization of space-time. (when, why, how, the.)

**If this hypothesis is correct** (called the author author), a detailed statistical analysis of the PLLCK measurement should demonstrate in relict radiation by disparation of circular tracks,

spreading from the final explosions of black holes at the end of the previous Eon, roughly on the layout of the water level A few moments after we cared in the water a handful of sand. In the reluctant background, inhomogeneity in the distribution of matter in the parent universe should be imprinted in the form of characteristic irregularities. What we consider today as a result of inflation, it could in fact be a manifestation of the final exponential expansion and itself a big bang then a manifestation of the final Big Rip of the parent universe. **Whether as so, me in the cyclical model is missing Jump change of crooking dimensions between "neighboring eons", ie. Big RIP and BIG-BANG.**

Entities that survive the longest and disappears in the course of exponential expansion in the moment of BIG RIP, will be black holes. ??? You can talk about this if we know completely "what" black hole is and "from what". Weight is the property of the mass and mass (energy) is "every local state of multifaceted 3 + 3d space-time", *simply, as otherwise said* : "Compactified units-clusters of **many-multiple curved dimensions** of space-time quantities". Even the fields are "fewer" curves .., *as otherwise said, I do not know*. The whole of their energy at the time of the final deviation-drain "**Shutdown**" is basically too "straightening all the crooked dimensions of the location" passes through the **transition area between eons** among the eons may not be an **flat** but "any" **interface** and leaves its imprint in the relic radiation of our universe . Another testable radiation may be massive gravitational waves that originated in the maternal universe, for example, with precipitation of giant black holes. Indeed, they should go through the barrier between the eons and leave measurable tracks on our relent background, **in the form of circular or elliptical tracks**, **relict radiation "is radiation" but you modify it "in the area in the telescope" ... then you can easily "make your desktop - This "elliptical traces, although radiation = the flow of photons no'Stopy' does not let the elliptical ... which will have the temperature either slightly higher or, on the contrary, lower than the average.**

After a long time, many of these circular waves can interfere with their neighbors and there is a relatively confusing interference pattern that should nevertheless be analyzed and reconstructed by **Fourier analysis *fourierovské analýzy***. methods. It was calculated that the thermal correlations that cause these effects, should not have angles above 60 ° on the heaven. Really observed correlations in the relent background truly disappear on an angular scale of 60 °, which has not yet been able to explain the standard inflation model.

## **Group theory of the field** (it seems to finally the interpretation "about quantizing time and space", which was the task of this scientific work)

In 2013, Steffen Gielen from the Canadian Border Institute of Theoretical Physics in Waterloo in Ontario, along with their colleagues, took the **quantization of space "to use"** quantum space is not "**explaining**" quantizing the lengths and flow of time ... and it is interested. The reason and proof that the reality of continuity of "lengths" is necessarily and demonstrably and necessarily quantized (not only on paper in mathematical formalism) and that without "quantization", reality cannot do ... New mathematical approach **to quantum gravity**, this is only a statement, not evidence of reality called Group Field Theory (GROUP THEIR), you "take the quantity of length" (demonstrably continuous in three dimensions perpendicular) and ... and brightness of the idea of the idea that you mention her to "pieces"



(the universe himself, but you are not on her) ... Well, and thus you already have the physical reality, from which you build "quantized space" and because gravity is a field, a field of crooked space-time, so here You have on paper "reality" (proven), ie quantized gravitational field, and mark it with the name, Třeba "Group theory" .. Which is a **form** of quantum field theory on [Lie's Grupa. Lieově grupě](#). In the Group theory theory, a **smooth space is created** by **merging** the basic **quantity** of the space and then evolves into the present form. And in this abstract idea-vision you can be wrong. Continuous space-time appears on the planckovsky scales, so quantized because the "smoothness-flat" space (three length dimensions) curledly-twisted into the form of "foam" [http://www.hypothesis-of-universe.com/docs/c/c\\_415.gif](http://www.hypothesis-of-universe.com/docs/c/c_415.gif) ; [http://www.hypothesis-of-universe.com/docs/c\\_c\\_419.gif](http://www.hypothesis-of-universe.com/docs/c_c_419.gif) and you are browsing here "in the cut" [http://www.hypothesis-of-universe.com/docs/c\\_428.jpg](http://www.hypothesis-of-universe.com/docs/c_428.jpg) (in the microscope always slices) and thus see the "geometric field" of dust and dilutigates, fields of points and spaces, fields of leader and zero, field "Nothing" and "something", field "black and white quantum". [http://www.hypothesis-of-universe.com/docs/c/c\\_427.gif](http://www.hypothesis-of-universe.com/docs/c/c_427.gif) and still auxiliary abstraction [http://www.hypothesis-of-universe.com/docs/c/c\\_424.gif](http://www.hypothesis-of-universe.com/docs/c/c_424.gif)

Gielen together with other theorists took place a significant breakthrough when they managed to derive Fridman's equations directly within the **quantum concept** of space-time. Further efforts are now focused on a precise description of the space itself in a large bang, if it is **the basic idea of HDV** (foam-gluouová plasma, where "bodies-produced" elemental particles of "package" dimensions 3 + 3 Speakers remaining in the geometric configuration of their curvature, but "surrounding" space-time is further expanded ... etc.) cosmological inflation and dark energy.

## Observation data

### Anisotropy of the protor

The cellular structure of the space should lead to fine anisotropy in certain selected directions. The research team led by John Webb from the Australian University of New South Wales watched the distant Kvazar [kvazar J1120 + 0641](#), whose radiation is distracted on the ground on several interstellar gas clouds. With the help of genetic algorithm, researchers first cleaned data from noise and other disturbing influences. Subsequently, they concluded that a defective structure constant that is a combination of light, elemental charge, planckovy constants and vacuum permittivity, remains constant in time, but slightly changing in space. The fine structure constant determines the emission and absorbent properties of the atoms, is therefore suitable for astrophysical measurement of a very distant universe. Webb's team showed that there are at least one axis in the universe (so-called dipole axis) along which the fine structure constant varies slightly compared to other spatial directions.

### Scattering lights on empty space

**Sampling of space leads to the space in addition to macroscopic (gravitational) curvature also discrete microstructure of LH radius.** Foam of a whirl vacuum, which appears Mr. Zoul as the "space of space" quantity., even though the space is on these scales, **the foamed microstructure** is finally (!)Well, finally (!) This from the scientist studied climbed ..., as a hairy blanket; The foam appears to be "quantization of continuity" ; The foam appears to be "quantization of continuity" for electromagnetic radiation with a longer wavelength, a variety of quantum sampling of the metrics in the respective longer scale. **Not fully, fields are still**

"crooked space-time" [http://www.hypothesis-of-universe.com/docs/c/c\\_427.gif](http://www.hypothesis-of-universe.com/docs/c/c_427.gif) Photons of higher energy with a shorter wavelength could be on the sampling metrics of space-time in a delicate scale " more sensitive "than low-energy photons. In a sense, such a wave would have to "burn" pathway inequalities, caused by subtle disorders "of crooked dimensional sites" metrics and could result in their dispersion on the grainy grain structure.  
[http://www.hypothesis-of-universe.com/docs/c/c\\_171.jpg](http://www.hypothesis-of-universe.com/docs/c/c_171.jpg)

The New Horizons [New Horizons](#) probe after taking a tight flying around the dwarf planet Pluto, continues to the depths of Kuiper's belt, [Kuiperova pásu](#), where far from the sun and cosmic dust, which would reflect the solar radiation, performing interesting measurements as it is actually in the universe of light. Tod Lauer from the US National Optical Astronomical Laboratory ([NOAO](#)) in Arizona and his coworkers let the probe take pictures, then subsequently analyzed. When all known sources of visible radiation were filtered out of the images, they were still half the radiation. This means that we can not say about half the visible radiation in the universe, where it actually comes from. The result is very reminiscent of the situation where we would in clear weather measured the amount of light at the ground surface. After reading the light coming directly from the solar wheel, there would still be a lot of sunlight scattered in the Earth's atmosphere that comes into the detector from different random directions and makes the day clear. Neither interstellar space certainly is a completely empty space, astronomers, however, performed correction on the scattering of light on an extremely thin interstellar, whose density is about 1 hydrogen at the cubic meter. However, even after this correction, there is still a large amount of light radiation, whose origin is completely unknown. **So it could be another of the speeches of the quantum structure of space**, sir Zoula, I would use "quantum manifestations of space-time structure" because even time is three-dimensional and also participates in those manifestations, ..a quantity means "curves" dimensions "A blessing vacuum" (the act of "creasion dimensions" of space-time leads to the construction of matter, ie elementary particles and fields) on which the photons can be slightly distracted.

JN, comment 18.01. - 26.01.2022

(.. I'm a layman, an untrained amateur... And from your words from 2006, Mr. Zoulo, a folk thinker in a derogatory sense, hence the words of your friends Hála, Kulhánek, and others, **that HDV is "shit". ., phantasmagoric nonsense** ". My HDV is not a sophisticated and not a theory at all, it's a layman's vision \* **to provoke the thinking\* of decent educated people...** and that's what science is all **about**).

Translation 31.03.2022 - 03.04.2022

Does the reader think that Mr. Scientist (who insulted me along with his peers) that here on 22 pages explain "what is quantization"? And "why are the dimensions of space-time" quantized? **and what is the essence of dimension quantization?)** )