https://www.youtube.com/watch?v=kwI-nIXMa5M

Answer: Could there be extra time dimensions?

Odpověď: Mohly by existovat další časové dimenze?
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(01)- According to string theory if there are about 11 dimensions rather than the four that we know I was just wondering whether that of the missing seven the chances are high or low that at least one of them will be another one of time or is time just a unique dimension so you ask could there be extra time dimensions could some of the extra space-time dimensions that say string theory often suggests B time like that's a very interesting question time is one of the most mysterious aspects of of our theoretical framework and you know the first person I know that wrote a interesting paper about the possibility of extra time dimensions was Andre Sakharov this was before string theory but extra dimensions go back the Kaluza and Klein in the 1920s and but everyone has thought about this including Zeca runs into problems if you time is very different although unified with space very different than space as you know in in ordinary space you can go around in a circle and come back to the same point time is there's only one time dimension so far and we can only go in one direction in time now imagine we had two times two time coordinates and time would be sort of like a plane and you could move in time in a circle and come back to the same point the same instant and once you start imagining coming back the same instant in time you get into all sorts of problems much like you have when you contemplate time travel where you can move back in time and then just sit there until this instant is so I could come back if I could time travel to this very instant in space and time that gives rise to all sorts of causality paradoxes you could go back and kill your grandmother and then you wouldn't exist and so on and so all attempts so far to incorporate extra time coordinates and consider a space-time with more than one time have led to various types of inconsistencies or contradictions breakdown of causality it's not that people haven't tried they have tried on normally they try to get rid of or explain away the extra time dimensions and show how they're not observable thereby avoiding some of these contradictions but they haven't truly been successful so I don't really know the answer to your question there might very well be a framework in which there are more dimensions of time after all there are lots of dimensions of space there might be a framework in which both space and time are emergent concepts in which case the number of dimensions of time by itself

being an emergent concept but we just don't know it's a it's a lot of fun to speculate about such things but so far nobody has been able to conceive of a sensible way of describing physical reality without a unique time

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(01) - According to string theory, if there are about 11 dimensions instead of the four we know of, I was just wondering if the missing seven chances are high or low, that at least one of them will be another time, or that time is just a unique dimension, so you wonder if there could be other time dimensions. ((!! I'm excited that there has been a physicist in the world who thinks about more dimensions of time. This is a short distance from my next idea that "packing" dimensions (time and length) produces elementary particles of matter. → http://www.hypothesis-of-universe.com/index.php?nav=ea How simple and easy!)) or some other space-time dimensions that say string theory often suggests that time B is like a very interesting question, time is one of the most mysterious aspects of our theoretical framework, and you know the first person I know to have written an interesting article on the possibility of time dimensions moreover, it was **Andrei Sakharov**. That was before string theory, but other dimensions of time go back to **Kaluza and Klein** in the 1920s, and everyone thinking about it, including **Zeca**, has problems. ((Our Universe doesn't have problems, but people-physicists have problems with understanding "why" there should be extra extra dimensions of time .People need 3 + 1D space-time…, but until they understand the idea of HDV, ie that we need other dimensions to understand the "origin of matter", not "from the strings of Nothing", but from those wrapped three dimensions of time and lengths 3 + 3D http://www.hypothesis-of-universe.com/docs/c/c_426.jpg ; http://www.hypothesis-of-universe.com/docs/c/c_421.gif ; http://www.hypothesis-of-universe.com/docs/c/c_416.jpg ; http://www.hypothesis-of-universe.com/docs/c/c_415.gif ; http://www.hypothesis-of-universe.com/docs/c/c_411.jpg ; http://www.hypothesis-of-universe.com/docs/c/c_358.jpg . Physicists still need 3 + 1 D space, because they are still captivated by the idea of "scalar omnidirectional time". Why ? Why ? Because here on Earth we do not observe that time runs at different paces in three axes , but it is so that it runs… .; We observe "**practically**" the same time $t = t_1 = t_2 = t_3$, eg hour → t_1 = 3600.0000000**30** seconds; t_2 = 3600.0000000**30** sec. ; t_3 = 3600.0000000**30** sec. (I came up with the numbers 32 or 30 in the interpretation), although we know that in many physical situations of "movement, changes of energy", etc., the passage of time is different, t_1 = 3600.0000000**33** seconds; t_2 = 3600.0000000**30** sec. ; t_3 = 3600.0000000**30** sec. That's why the "scalar" "t" is enough for us. The globe is "positioned in space-time so cleverly" that * tempo * the passage of time is in all three components - the dimensions are almost the same, respectively the differences are in the order of the eighth place after the decimal point. **$c = 10^8/10^0$**; The human being is eight orders of magnitude more sensitive to the perception ***of length intervals than time intervals*** . If the Ferrari car travels along the racetrack, we will perceive its movement (along the line "x"), ie the speed of 250 km / h. = 250,000m / 3600 sec. Rewritten into components of 3 + 3 dimensional raster →
x = **250 000m**; y = **0m**; z = **0m** (but beware, the globe is round and so more precisely **x** = **250000m**; **y** = 0, 0000000**2m**; **z** = 0.0000000**5m**, we practically neglect these small values); ** **dtto with time** ** t_1; t_2; t_3; are:
t_1 = 3600,0000000**33** seconds; **t_2** = 3600.0000000**30** sec. ; **t_3** = 3600.0000000**30** sec. (I came up with the numbers 32 or 30 in the explanation). If the Ferrari were transformed into a space rocket that increases speed to… **v = 0.8c**.,
examples are here http://www.ktf.upol.cz/joch/priklady/dilatacep.html ; https://www.walter-fendt.de/html5/phcz/timedilation_cz.htm and elsewhere too -… then, according to STR, the rocket would dilate time, of course !!!! dilated in the 3 + 3D system only in the direction of movement !!!!, ie t_1 = 5.0 sec. t_2 = 500.0 sec. ; t_3 = 500.0 sec. Which is not perceived by the

commander of the rocket, but perceived by the Observer from the basic system, and only for the reason that the signal-information arrived "rotated", ie after the crooked space-time. That's why we shoot the STR dilation here as "dilation" but there is no dilation on the rocket, there is still **t = t_1 = t_2 = t_3**)) including Zeca, it has problems, it has problems if your time is very different, even if unified with a space very different from space as you know it in ordinary space, you can go around in a circle and go back to the same point, ((no, In the macro world, all three dimensions of time and length expand - you say the universe 3 + 1 expands, I say the universe 3 + 3 expands, but in the microworld of planck intervals there is a "boiling foam" of dimensions which can be understood as a chaotic change in curvature when "If you go after the dimension", you go one moment "forward" and the other moment after the same dimension "backward" dtto after each dimension of 3 + 3 D, so it is a foam where time does not go one way as in the macro world. from Chacon still chaotic, in this foam is born "geons" = packages of precise shapes using different numbers of dimensions, the packages then have conglomerating shapes. clone "= frozen e against "foam vibration". Packages come together - they connect in conglomerates = atoms, these in molecules, compounds, chemistry, biology, etc. to DNA. These "foamy" dimensional structures then "float" in less curved 3 + 3D space-time, there are probably only three to four (gravitational field, electromagnetic field, weak field, gluon field, Higgs field, etc.); in these fields the clusters-conglomerates of packed dimensions "float" and pole and 4 fields then "float" in the basic Cartesian grid - yarn - raster of totally flat 3 + 3D. - - So physicists yet !!! they do not need more time dimensions in the macro world of fields, but when they look for the essence of matter they will need a more dimensional state of being))
time is **so far** only one, time dimension and we can go only one direction in time, ((no, it's not! the direction of "flow" in that foam in chaotic directions. A new shift in thinking: HDV is that 3 + 3D space-space smooth-flat non-curvature is in this universe only… only "ground-base-raster" to the realization dynamics of mass and space-time transformations… that "curved states of 3 + 3D space-time "They swim, they are nested" into that "raster, the flat Euclidean space-time"…; so TIME does not run for us, it is a dimension, but we-objects "from the coiled dimensions of production" run after that time dimension, after that raster, and we cut into time intervals intervals, which we then perceive "as the flow-flow of time. **We don't run out of time, but we run for him**, we run "after him". Physicists lack this new insight to understand the multidimensionality of time, they lack to explore this vision of HDV.)). Now imagine that we had twice two time coordinates and time would be something like an airplane and you could move in time in a circle ((no, no - we don't move "in time" running around us, no, we by our shift-movement "over time" we perceive the flow of time. If we should abstractly consider "running against the arrow of time", ie against the expansion of the universe, ie against the "unpacking" of the time dimension, moving to the time dimension on the contrary, then it is only possible "when increasing the curvature of the own system dimension" that dimension, and it collapses just in matter, in elements)) and go back at the same time, the same moment, and once you start imagining going back at the same time, you get to all kinds of problems. ((In the macro world, there is an expansion of dimensions, ie flow - the passage of time in only one direction. In the microworld, collapsed 3 + 3D states prevail, and therefore the time arrow can be changed there at short intervals.)). similar to when you are thinking of time travel where you can go back in time and then just sit until that moment is there so I could go back if I could travel through time to this moment in space and time that evokes all kinds of causal paradoxes, you could go back and kill your grandmother and then you wouldn't exist and so on and so all attempts far to include extra time coordinates and considering space-time with more than one has led to different types of inconsistencies or contradictions Normally, they try to get rid of or **explain the extra time dimensions and**

show how they are not observable, ((they are observable, but you-physicists have not studied it yet - - are:
t_1 = 3600,0000000**33** seconds; t_2 = 3600.00000000**30** sec. ; t_3 = 3600.00000000**30** sec.- they are observable, but you-physicists have not studied it yet, you neglect the differences in the eighth decimal place, but in CERN those differences can be measured but you do not examine them. thus avoiding some of these contradictions, but they have not actually been successful, so I do not know the answer to your question. because there are multiple dimensions of time, after all there are many dimensions of space, there may be a framework in which space and time are emerging concepts, in which case the number of dimensions of time is in itself an emerging concept, but we simply do not know. I know it's a lot of fun to speculate about such things, but so far no one has been able to imagine a reasonable way to describe physical reality without a unique time.
((I did it 40 years ago, and I still justify it with a tremendous effort to improve the sense that "why" the universe has more time dimensions. Because they are in the Universe, and because the Universe builds matter from them. In the macro universe, three time dimensions are not very important with the fact that they are "t" = $t_1 \neq t_2 \neq t_3$, but in the microworld they have a huge significance = they are built by twisting-packing-coiling of dimensions matter . It would even be good to examine how wrong or erroneous the acceleration formula $\mathbf{a = x/t_1 . t_2}$ is by t_1 and t_2 being different $t_1 \neq t_2$ and physicists averaging it)) http://www.hypothesis-of-universe.com/docs/f/f_020.pdf

Physicists did not understand because they did NOT want to understand HDV, they did not want to understand, they vehemently refused to make any meaningful arguments against HDV.))
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