I will translate to (A)

https://www.youtube.com/watch?v=RcYIgWX_ClI

Lecture by doc. Michal Malinský: on the fate of matter (Fridays 20.5.2022)

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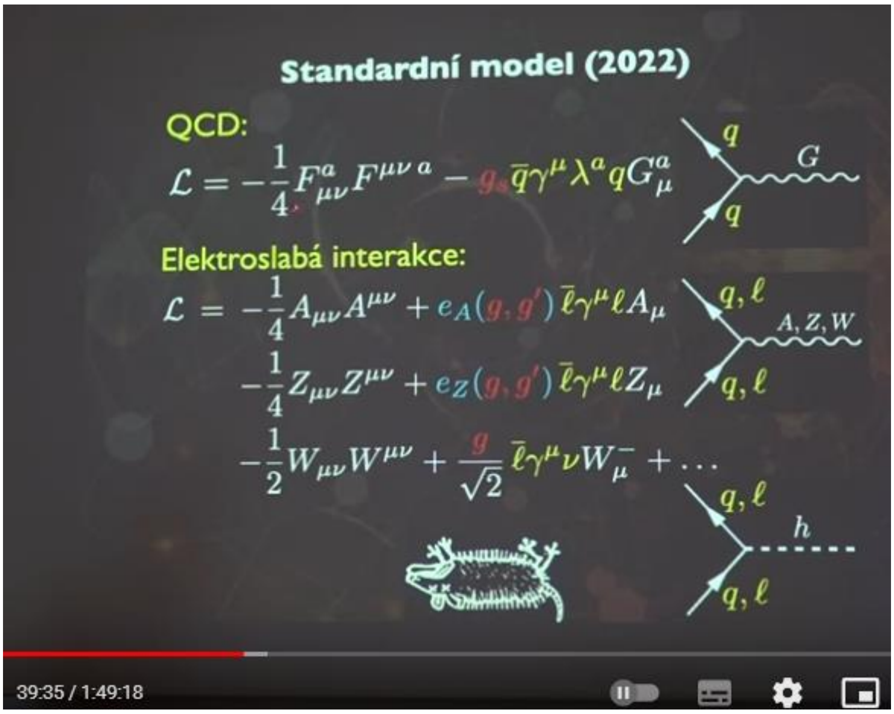
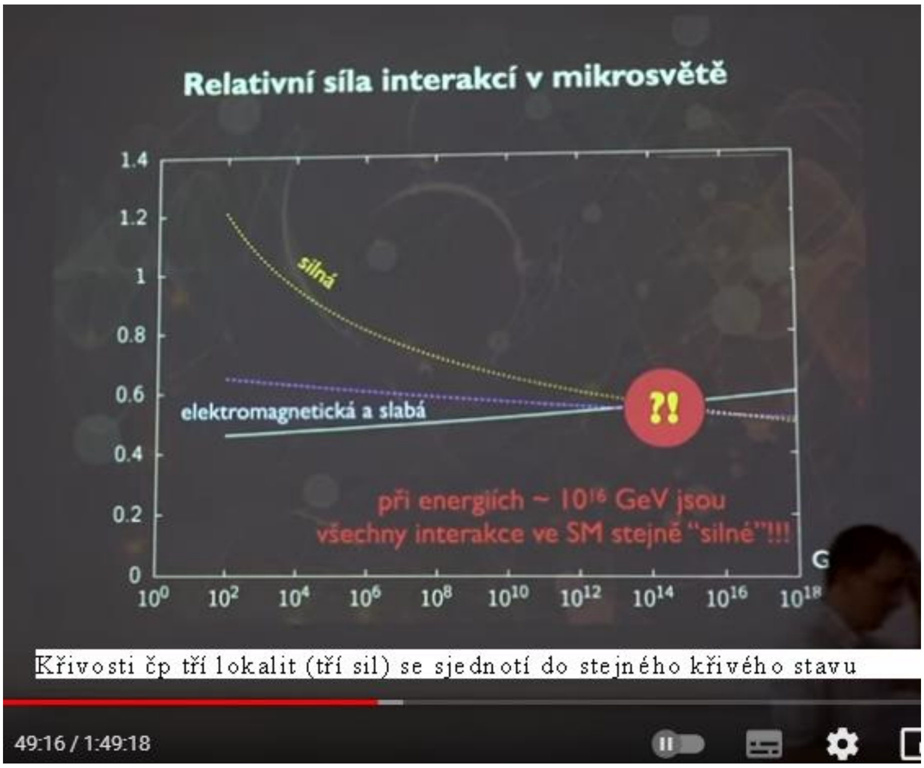
10,675 views 24/05/2022 https://www.youtube.com/watch?v=RcYIgWX_ClI (My main comment is from **page 7,** picture **no. 48 and more**) Fig.35



Malinský says : the coupling constants "g" **are not constants, but parameters** that depend on the situation, i.e. on the stop-state of the curvature of space-time in some location. Malinský is talking about The "Grand Unification" of the three interactions. I comment: yes, it is possible and it is also in the spirit of my vision of the curvature of all six 3+3 dimensions of space-time, which "meet" in some "common" curvature under a "common" parameter ..; it seems to me as if this "three-interactional unification" of the already precise parametrized curvature arose from the "chaotic state of curvatures" = foam of dimensions that just preceded….; somehow it revolves around the quark-gluon plasma. Of course, I'm groping, I don't know, but I feel that the chaotic foam of crooked dimensions is gradually "parameterized" into the "universe-chosen" topological-geometrical "frozen" implementation of 3+3 dimensions. Erm, I'm groping and getting smart minds to think about this vision.

Fig. 39



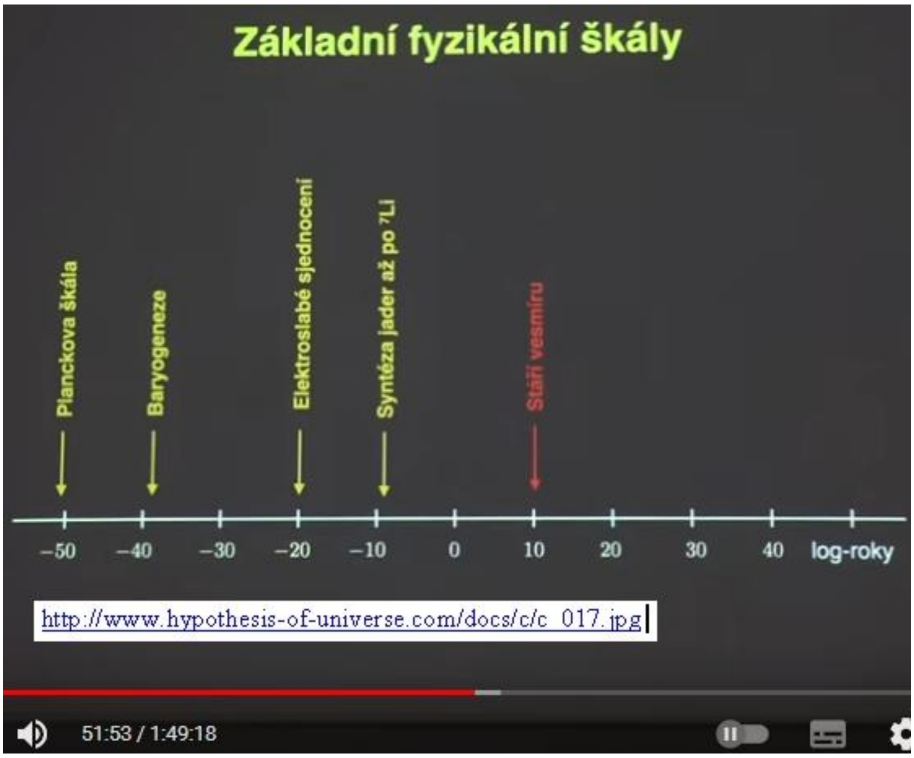
In essence, "high energies" are precisely a higher distortion of the 3+3 dimensions of space-time. Malinski's vision and mine should intersect at that point ("?!")..., his talk that the interactions are equally "strong" should "match" my vision of the "3+3 dimensional distortion" from a different angle of view .Fig. 41

The grand unification will certainly not fundamentally contradict my ideas about the "warping of dimensions" of space-time, which are the essence of the "unification of interactions", since matter is also built from those dimensions. "Boiling vacuum" ~ "foam of dimensions" ~ "quark-gluon plasma", http://www.hypothesis-of-universe.com/docs/c/c_034.jpg ; http://www.hypothesis-of-universe.com/docs/c/c_029.jpg ; http://www.hypothesis-of-universe.com/docs/c/c_036.jpg these are states of high curvature and can be considered mathematically as linear states...also in the spirit of my other vision of alternating symmetries with asymmetries http://www.hypothesis-of-universe.com/docs/h/h_082.jpg ;

Fig. 42

Gravity is no longer linear, it is less curved spacetime than "dimension foam", it is a "parabola". How the "boiling foam" goes from a linear to a non-linear parabola - gravity, mathematicians have to solve that, I can't.

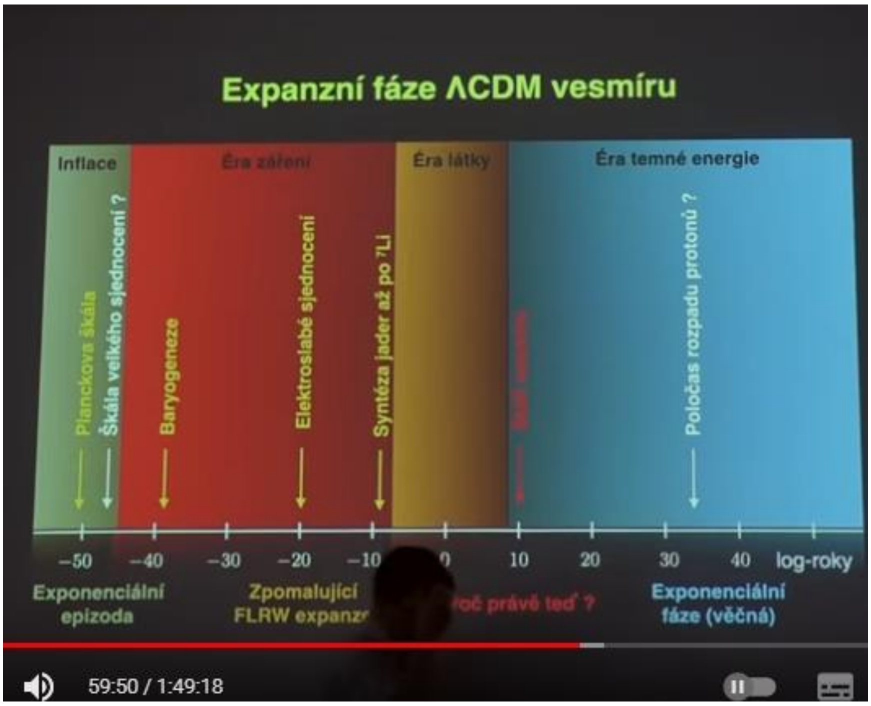
obr. 44b



My time and distance scales http://www.hypothesis-of-universe.com/docs/c/c_017.jpg are interesting in that the Earth is almost in the middle of the scale

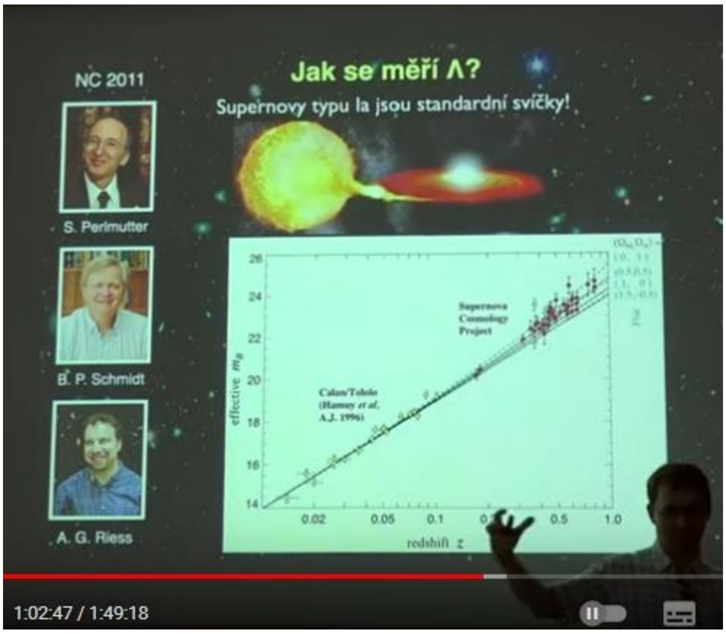
Fig. 45 →

Fig. 48 →



← ← JN ...From the age of 10^{-44} years to 10^{+9} years there is an era of radiation, an era of matter, the universe also expands, but not exponentially, it expanded "normally" parabolically, i.e. the expansion was decelerating - the Fiedman-Lemaitre-Robertson-Walker curve . An interesting question is why exactly "now", 10^{10} years after the Big Bang, we have reached the phase of expansion change. |And how do we actually know that the universe is expanding in this accelerating way?| This is a relatively new thing (1:00:10h) for which NC was awarded in 2011 (**Pertmutter + Schmidt + Riess**) and what the three gentlemen did was to **use** one very interesting properties of type Ia supernovae. (***01**), that arise in binary systems. One of them, which "pulls" the mass on itself, so at one point when this overflow exceeds the Chandrasekhar limit, which is 1.44 times the mass of the Sun, the gravitational forces will prevail and the mass of the white dwarf will no longer be able to hold that degenerate electron gas in the state of this gas and neutronization will occur very quickly and the energy will be emitted in the form of a supernova. What's remarkable about these supernovae of this type is that they're standard candles, because right there there's something like the Chandrasekhar limit, so they all explode under very similar conditions and…and if you |**use**| (***02**) and you look at supernovae that are far enough away from us...so these guys studied and studied these supernovae at redshifts, somewhere between 0.5 -1.00

obr.50



so they discovered following : in ... actually >in universes, you have no dark energy in them,< (*03) , in which "lambda" is exactly zero, so the luminosity of these supernovae should follow this curve, *** (*04), linear, which is a luminosity decay curve not detected, but modeled |suggested|, for *luminosity decay with distance* - as a linear relationship (!), because physicists still believe that the universe during the period from the first inflation to the second "inflation therefore expanded linearly to the accelerated expansion of cp, i.e. Hubble's **$v = H_0 . d = c . z = c . \Delta\lambda/\lambda$** . If it is modeled **as** linear, it may not be true in reality. In reality, "Guth inflation" may not apply either, and the expansion may not be Hubble-like, **expansion may be the unwrapping - unpacking of space-time curvatures** http://www.hypothesis-of-universe.com/docs/c/c_081.gif (→ auxiliary animation) which towards the Cod it is increasingly crooked → http://www.hypothesis-of-universe.com/docs/c/c_239.jpg , but here you see → or do you observe observationally ?? a clear statistical indication that those supernovae also lie outside this curve, suggested, that the trend is here somewhere in those places, that the curve corresponds to the fact that the most distant supernovae that you **see are a little darker than they should be according to of those models** ***well, that's the point; the model does not match the observational reality, i.e. that the "observed brightness curve" "darkens" (!). Yes, it darkens, but |three gentlemen Nobelists| they *evaluated this phenomenon *as the reason being dark energy** (non-zero "lambda"). They **"resolved"** the inconsistency again only by **"suggestion"** (not by observation, not by reality, but only platonically) without confirmation ***That is, a proposal for reality!, A SUGGESTION**.* I propose that the reason is not dark energy, but "curvature-curvature of space-time" → global large-scale space-time towards the Bang is more and more curved until it reaches the state of plasma = which is a high curvature of space-time, it is a "boiling vacuum of dimensions", it is a foam of dimensions and in this foam the elements of matter are born, it begins quarks + gluons, then leptons, baryons,..., etc., .., atoms, molecules, compounds..., etc., up to proteins, DNA. Matter is born by the "packaging" of the space-time dimensions themselves. So the darkening of the luminosity of supernovae Ia does not have to be due to dark energy, even though dark energy can still be in "my model", and it is: that dark energy is the state of space-time "above the Planck scale size" it is a *boiling vacuum*, i.e. a chaotic curvature of dimensions..., therefore today the **density** of dark energy is and can be almost constant in the "unfolding" 3+3D universe, i.e. already in a much straightened curvature no. Towards Wow, the ratio of "boiling vacuum" to "unfolded space-time" is different, the ratio (not the amount) is in favor of dark energy. It seems to the **nobelists** that supernovae darken more compared to the model, yes, but this is not due to the "quota of dark energy" (it also changes), but **due to the increasing curvature of global space-time in the direction of the Big Bang...,** the universe – space-time is smaller and smaller, and also crooked and crooked, the density of black energy is higher, and higher ("lambda" non-zero) because it itself is also a "boiling foam" of dimensions. The reason for the darkening of Ia supernovae is therefore the "curving" of the space-time "expanded and unfolded" from the Big Bang, (still a parabolic curve?), not the dark energy itself, which is also "there", but which is also "its" state foam of crooked dimensions..., that is, if dark energy exists in the universe (and it does) it is not the reason for the "accelerating" expansion of space-time, nor the darkening of supernovae Ia, no, but the reason for the darkening is that we observe at an increasingly greater distance (towards Cod) greater curvature of space-time, http://www.hypothesis-of-universe.com/docs/c/c_053.jpg in which that supernova, "more darkened, is located. It is also in accordance with STR. The light from that Ia comes to us "along the arc", along the curved global dimension…,

in which there is no cosmological constant. This dimming of supernovae just corresponds to the effect in the accelerating expansion. This is precisely the case when (1:02:41h) you can determine when the value of that lambda can be determined (?), when the lambda is non-zero. Here the interpretation will be wrong. (I will explain elsewhere). This means that our questions about how systems behave in the universe, which is dominated by dark energy, are relevant. (?) If you imagine what happens next with this scaling parameter, then in such types of cosmologies the character of the expansion is reversed (and this is where the speculation begins, not the knowledge) Even in today's space-time, when it expands = better to say **expands**, there may not be and is not an accelerated expansion "due to black energy" ... because a constant density model can be offered dark energy during which space-time expands only parabolically! ! Can Mr. Malinovský? - - Yes, in the past, around the era of matter, there could have been a lot of dark energy in absolute value, i.e. the ratio of TE to x3 higher, but that does not mean the reason for the accelerated expansion "today". Because other explanations can be offered. (before they had three Nobel laureates). and suddenly everything starts moving away from everything, exponentially. No. Not only exponentially fast, but also accelerated exponentially, but simply because all derivatives of exponentials are again exponentials, (1:03:48h) and thus the question creeps in: can the bound systems actually withstand this? The answer is: fortunately, yes.

Mr. Malinský's further explanation is no longer on my agenda, I have no need to comment.

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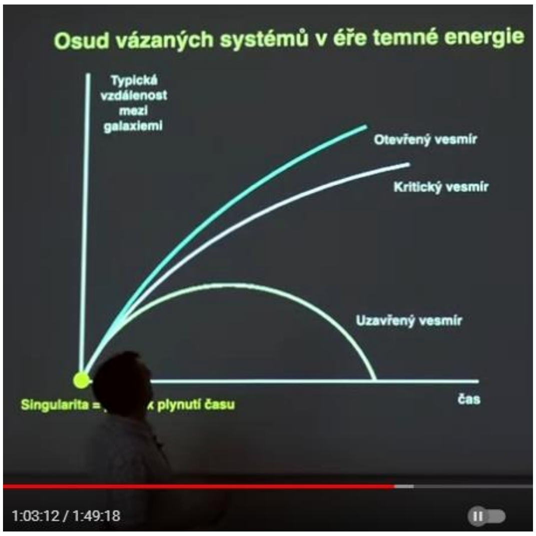
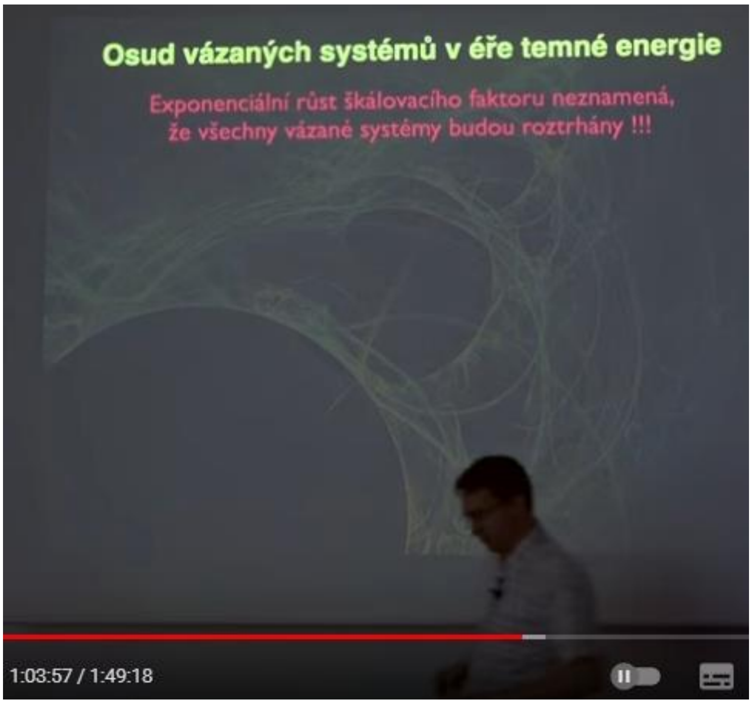


Obr. 55



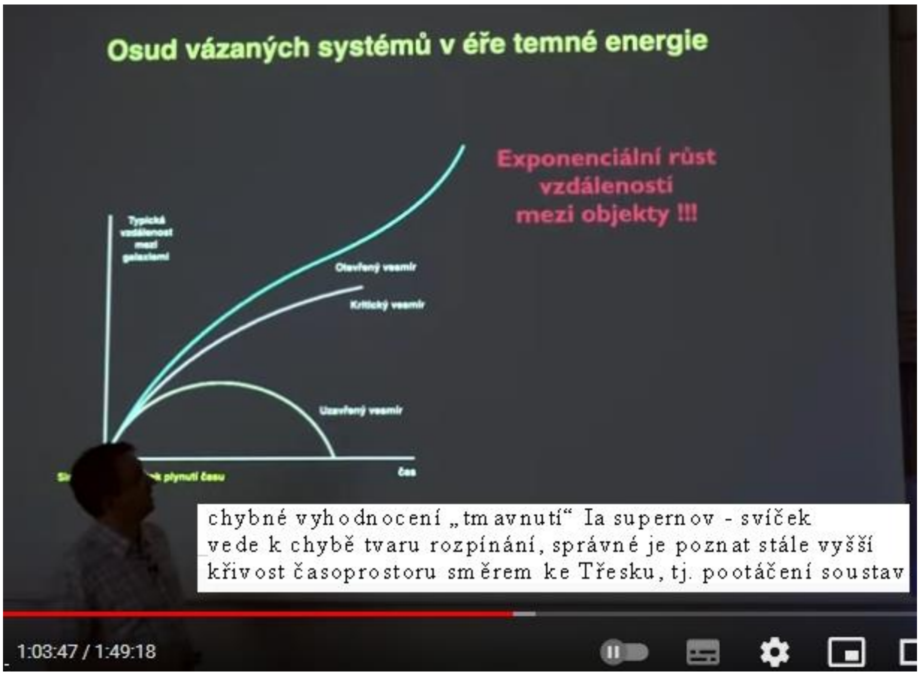
end…

Three days ago, I commented on this lecture by Malinský in a different mood, as follows →
Although Malinský a) "clarified" the behavior of Ia supernovae, i.e. that they have the same luminosity = the same energy output during the explosion, which, although it decreases with distance, predictably, linearly - see the "standard curve" in the picture = and so you can to use it, as Malinský says, as a model of the decrease of luminosity with distance, but he did not say b) "how-what" was detected-measured = deviation of the luminosity of all Ia candles from the "standard curve D E S I G N E D" ?? – see the second curve in the picture, when increasing the distance of the candles from us, the observers. Malinský did not say whether the "model"

= Ia curve was only designed or also actually measured and plotted in the "standard curve". And then other Ia candles were measured, in which the "darkening" with distance was found, i.e. the deviation of luminosity from the model with increasing distance. (?) Then Malinský said without clarification **c)** that it *occurred* to the three "**nobelists**" that the *reason* for the "darkening" of supernovae = deviations from the model is the "accelerated expansion of the universe" and that from the age of about 1010 years from Třesk. Respectively, Malinský literally said: (*11) **And this darkening of distant supernovae corresponds precisely to the effect of accelerating expansion.,** says Malinský. But this is just an idea and it may not be true!, adds Malinský. !! (I also have an idea how to explain the deviation of the *observed* "darkening" of Ia from the theoretical model of Ia.) Malinský did not say >how-and-what< the Nobelists >clarified the idea< about the "accelerated" expansion of space-time..., just a statement about the fact that the deviation of the "darkening" of supernova-candles from the model occurs due to the accelerated expansion of the no. By the way, Malinský also did not say **d)** "how" is "lambda" measured?! ||although he has this question in the title of his slide||

The effect of the accelerating expansion has a different reason, a different origin, a different explanation: it is precisely that rotation of the systems according to STR when "vé" approaches "cé". It is still said to be true today, i.e. that the statement is valid, not the established reality, when "vé" is close to "cé" ***Hubble's linear** dependence **v = H0 . d,*** which therefore also applies to supernovae Ia. But this linear dependence (Hubble) is not consistent with STR. It can be proven that STR is essentially a "rotation of systems" (a system between an Observer passed to rest and an observed object, whose "vé" is close to "cé".) From this title >>rotation<<, the reality is time dilation and contraction length. (on the rocket with "vé" "cé" is approaching, time runs at the same pace as on Earth, but the Earthling OBSERVES !!!, i.e. receives information from the rotated object, **observes** that dilation and contraction, not that "there ” on the racket is). From the logic of the matter, it will not be surprising that the same thing (i.e. the rotation of the global macro-universe, large-space-time) can also be observed in those Ia-supernovae, candles, that information emanates from them = light, "darkened", which was emitted from the rotated system to our system, and that is why we have the "darkening" of the candle radiation. By looking into the past, today's almost flat space-time changes, it is more curved and therefore, "lambda" increases numerically to states closer to the Bang, states approaching the relict old age, where space-time is already more twisted, it is more crooked than today's...; the older the space-time, the more crooked and therefore the coordinate systems of such an object are rotated...., therefore Ia light "darkens". The Nobelists ||**evaluated**|| the "darkening" of supernovae is mistakenly attributed to today's accelerated expansion of *today's* space-time, and accelerated because the universe contains dark energy today, i.e. "lambda is non-zero". http://www.hypothesis-of-universe.com/docs/c/c_239.jpg This is said to be the type of observation from which the "lambda" can be determined and thus the accelerated expansion of the "today's state". http://www.hypothesis-of-universe.com/docs/c/c_239.jpg . An incorrect evaluation of the "darkening" of Ia supernovae - candles leads to an erroneous reasoning, i.e. to a parameter of the expansion of space-time such that the expansion accelerates. I think that it is correct and necessary to first find out whether this "darkening" has a cause-reason in the ever-increasing curvature of space-time towards the Bang, i.e. the rotation of the systems in accordance with STR.****

obr. 54 →



JN, com 31.05.2022

Note: I will send my opinion to Mr. Malinský with a request for his expert counter-opinion... and I am 1000% convinced that Mr. Malinský will not give me any. (and I know, I also know the reason "why").

Today is 11/07/2022 and his counter-opinion has not yet arrived.

And today is March 23, 2023, when I use a translator to translate the text into English. Docent Malinovský's opinion did not come. (Either he does not understand objections or he despises objections...which is significant for Czech scientists).

………………………………………………………………………………………………

Notes

pro $a_x = \frac{du_x}{dt} = \frac{d^2x}{dt^2}$ **bude řešení podle složek času :**

$a_x = \frac{du_x}{dt_x} = \frac{d^2x}{dt_x . dt_x}$; $a_x = \frac{du_x}{dt_y} = \frac{d^2x}{dt_y . dt_x}$; $a_x = \frac{du_x}{dt} = \frac{d^2x}{dt_z . dt_x}$

$a_x = \frac{du_x}{dt_x} = \frac{d^2x}{dt_x . dt_y}$; $a_x = \frac{du_x}{dt_y} = \frac{d^2x}{dt_y . dt_y}$; $a_x = \frac{du_x}{dt} = \frac{d^2x}{dt_z . dt_y}$

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V matici vypadnou 3 shodné případy … a možná vypadnou další, když …. (?)

pro $a_x = \frac{du_x}{dt} = \frac{d^2x}{dt^2}$ **bude řešení podle složek času :**

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V matici vypadnou 3 shodné případy … a možná vypadnou další, když …. (?)

Řekl jste mi, pane, že derivace rychlosti podle složek času **je nesmysl** … zde jsou :

$\boldsymbol{u} = \frac{d\boldsymbol{r}}{dt}$; ……. Rychlost pro stanovení zrychlení a transformací zrychlení

$a_x = \frac{du_x}{dt}$; $a_y = \frac{du_y}{dt}$; $a_z = \frac{du_z}{dt}$ Derivace rychlosti podle „**univerzálního**" tempa „t" , které se nachází ve všech třech dimenzích času jako jednotné tempo (stejný ukrojený interval do tří časových os) odvíjení času do tří složek prostoru x,y,z.

Ovšem derivace rychlosti podle „složek veličiny čas" ($t_1=t_x$; $t_2=t_y$; $t_3=t_z$) s různými tempy odvíjení času „t" v jeho časových složkách (t_x ; t_y ; t_z)

pro $a_x = \frac{du_x}{dt} = \frac{d^2x}{dt^2}$ **bude řešení podle složek času :**

$a_x = \frac{du_x}{dt_x} = \frac{d^2x}{dt_x . dt_x}$; $a_x = \frac{du_x}{dt_y} = \frac{d^2x}{dt_y . dt_x}$; $a_x = \frac{du_x}{dt} = \frac{d^2x}{dt_z . dt_x}$

$a_x = \frac{du_x}{dt_x} = \frac{d^2x}{dt_x . dt_y}$; $a_x = \frac{du_x}{dt_y} = \frac{d^2x}{dt_y . dt_y}$; $a_x = \frac{du_x}{dt} = \frac{d^2x}{dt_z . dt_y}$

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V matici vypadnou 3 shodné případy … a možná vypadnou další, když …. (?)

pro $a_y = \frac{du_y}{dt} = \frac{d^2y}{dt^2}$ **bude : …..obdobně**

a pro $a_z = \frac{du_z}{dt} = \frac{d^2z}{dt^2}$ **bude : …..také obdobně**

03.10.2005

Pohybová rovnice je rovnicí ***vektorovou*** , tj. je to formální matematický vztah, který se při konkrétním výpočtu musí rozepsat do vektorových souřadnic:

$$F_x = m \cdot a_x = m \cdot \frac{d^2x}{dt^2}$$

$$F_y = m \cdot a_y = m \cdot \frac{d^2y}{dt^2}$$

$$F_z = m \cdot a_z = m \cdot \frac{d^2z}{dt^2}$$

Pohybová rovnice je rovnicí ***vektorovou*** díky tomu, že veličina Délka je (minimálně) třídimenzionální.
Namísto označení každé dimenze x, y, z, užiji označení x_1 , x_2 , x_3
Pokud by veličina Čas byla také (minimálně) třídimenzionální, pak si její dimenze označím t_1 , t_2 , t_3.
a pohybové rovnice nutno rozepsat do vektorové matice souřadnic :

$$\begin{array}{ccccc} m\frac{d^2x_1}{d\,t_1^2} & ; & m\frac{d^2x_1}{d\,t_2^2} & ; & m\frac{d^2x_1}{d\,t_3^2} \\ m\frac{d^2x_2}{d\,t_3^2} & ; & m\frac{d^2x_2}{d\,t_1^2} & ; & m\frac{d^2x_2}{d\,t_2^2} \\ m\frac{d^2x_3}{d\,t_2^2} & ; & m\frac{d^2x_3}{d\,t_3^2} & ; & m\frac{d^2x_3}{d\,t_1^2} \end{array}$$

Matematicky naprosto vpořádku…nyní potřeba zkoumat zda také fyzikálně. Dnes platí že $t_1 = t_2 = t_3 = t$

=TEXTY ... č.6-I am looking for a physicist

Poloha (souradnice) bodu $x=[x_1,x_2,x_3]$ Čas $t=[t_1,t_2,t_3]$

Poloha je funkci casu $x(t)=[x_1(t),x_2(t),x_3(t)]=[x_1([t_1,t_2,t_3]),x_2([t_1,t_2,t_3]),x_3([t_1,t_2,t_3])]$

Rychlost
$$v=\frac{dx}{dt}=\begin{pmatrix}\frac{\partial x_1}{\partial t_1} & \frac{\partial x_1}{\partial t_2} & \frac{\partial x_1}{\partial t_3}\\ \frac{\partial x_2}{\partial t_1} & \frac{\partial x_2}{\partial t_2} & \frac{\partial x_2}{\partial t_3}\\ \frac{\partial x_3}{\partial t_1} & \frac{\partial x_3}{\partial t_2} & \frac{\partial x_3}{\partial t_3}\end{pmatrix}$$

Kineticka energie $E=\frac{1}{2}mv^2$

$v^2=v\cdot v=$

$$\begin{pmatrix}(\frac{\partial x_1}{\partial t_1}\cdot\frac{\partial x_1}{\partial t_1}+\frac{\partial x_1}{\partial t_2}\cdot\frac{\partial x_2}{\partial t_1}+\frac{\partial x_1}{\partial t_3}\cdot\frac{\partial x_3}{\partial t_1}) & (\frac{\partial x_1}{\partial t_1}\cdot\frac{\partial x_1}{\partial t_2}+\frac{\partial x_1}{\partial t_2}\cdot\frac{\partial x_2}{\partial t_2}+\frac{\partial x_1}{\partial t_3}\cdot\frac{\partial x_3}{\partial t_2}) & (\frac{\partial x_1}{\partial t_1}\cdot\frac{\partial x_1}{\partial t_3}+\frac{\partial x_1}{\partial t_2}\cdot\frac{\partial x_2}{\partial t_3}+\frac{\partial x_1}{\partial t_3}\cdot\frac{\partial x_3}{\partial t_3})\\ (\frac{\partial x_1}{\partial t_1}\cdot\frac{\partial x_2}{\partial t_1}+\frac{\partial x_2}{\partial t_2}\cdot\frac{\partial x_2}{\partial t_1}+\frac{\partial x_2}{\partial t_3}\cdot\frac{\partial x_3}{\partial t_1}) & (\frac{\partial x_1}{\partial t_2}\cdot\frac{\partial x_2}{\partial t_1}+\frac{\partial x_2}{\partial t_2}\cdot\frac{\partial x_2}{\partial t_2}+\frac{\partial x_2}{\partial t_3}\cdot\frac{\partial x_3}{\partial t_2}) & (\frac{\partial x_1}{\partial t_3}\cdot\frac{\partial x_2}{\partial t_1}+\frac{\partial x_2}{\partial t_2}\cdot\frac{\partial x_2}{\partial t_3}+\frac{\partial x_2}{\partial t_3}\cdot\frac{\partial x_3}{\partial t_3})\\ (\frac{\partial x_1}{\partial t_1}\cdot\frac{\partial x_3}{\partial t_1}+\frac{\partial x_3}{\partial t_2}\cdot\frac{\partial x_2}{\partial t_1}+\frac{\partial x_3}{\partial t_3}\cdot\frac{\partial x_3}{\partial t_1}) & (\frac{\partial x_1}{\partial t_2}\cdot\frac{\partial x_3}{\partial t_1}+\frac{\partial x_2}{\partial t_2}\cdot\frac{\partial x_3}{\partial t_2}+\frac{\partial x_3}{\partial t_2}\cdot\frac{\partial x_3}{\partial t_3}) & (\frac{\partial x_1}{\partial t_3}\cdot\frac{\partial x_3}{\partial t_1}+\frac{\partial x_2}{\partial t_3}\cdot\frac{\partial x_3}{\partial t_2}+\frac{\partial x_3}{\partial t_3}\cdot\frac{\partial x_3}{\partial t_3})\end{pmatrix}$$

V 3+1 prostorocasu

$$v=\begin{pmatrix}\frac{\partial x_1}{\partial t} & \frac{\partial x_2}{\partial t} & \frac{\partial x_3}{\partial t}\end{pmatrix}$$

$$v^2=v\cdot v=\left(\frac{\partial x_1}{\partial t}\cdot\frac{\partial x_1}{\partial t}+\frac{\partial x_2}{\partial t}\cdot\frac{\partial x_2}{\partial t}+\frac{\partial x_3}{\partial t}\cdot\frac{\partial x_3}{\partial t}\right)=\left(\frac{\partial x_1}{\partial t}\right)^2+\left(\frac{\partial x_2}{\partial t}\right)^2+\left(\frac{\partial x_3}{\partial t}\right)^2$$

$$v=\frac{dx}{dt}=\begin{pmatrix}\frac{\partial x_1}{\partial t_1} & \frac{\partial x_1}{\partial t_2} & \frac{\partial x_1}{\partial t_3}\\ \frac{\partial x_2}{\partial t_1} & \frac{\partial x_2}{\partial t_2} & \frac{\partial x_2}{\partial t_3}\\ \frac{\partial x_3}{\partial t_1} & \frac{\partial x_3}{\partial t_2} & \frac{\partial x_3}{\partial t_3}\end{pmatrix}$$

$$m\frac{d^2x_1}{d t_1^2}\ ;\ m\frac{d^2x_1}{d t_2^2}\ ;\ m\frac{d^2x_1}{d t_3^2}$$
$$m\frac{d^2x_2}{d t_3^2}\ ;\ m\frac{d^2x_2}{d t_1^2}\ ;\ m\frac{d^2x_2}{d t_2^2}$$
$$m\frac{d^2x_3}{d t_2^2}\ ;\ m\frac{d^2x_3}{d t_3^2}\ ;\ m\frac{d^2x_3}{d t_1^2}$$

Matice rychlosti a zavedení konvence pro poměry x ku t

Matice rychlostí					symbolicky		
c	>	w	>	u	0/0	0/1	0/∞
c*	>	c	>	w	1/0	1/1	1/∞
c**	>	c*	>	c	∞/0	∞/1	∞/∞

symboly nula a nekonečno a jednička znamenají, že veličiny příslušné se k takovým hodnotám limitně blíží

https://www.youtube.com/watch?v=TAhbFRMURtg

Theoretical Physicist Brian Greene Explains Time in 5 Levels of Difficulty | WIRED

WIRED

10,6 mil. odběratelů

1 394 179 zhlédnutí 19. 4. 2023 5 Levels S1 E2

Time: the most familiar, and most mysterious quality of the physical universe. Theoretical physicist Brian Greene, PhD, has been challenged to explain the nature of time to 5 different people; a child, a teen, a college student, a grad student, and an expert.

1 394 179 zhlédnutí 19. 4. 2023 5 úrovní S1 E2

Čas: nejznámější a nejzáhadnější kvalita fyzického vesmíru. Teoretický fyzik Brian Greene, PhD, byl vyzván, aby vysvětlil povahu času **5 různým lidem**; dítě, dospívající, vysokoškolák, postgraduální student a odborník.

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