

1. **Moderní fyzika, např. prof. Kulhánek, říká, že, cituji ho :**

"**Časový interval mezi dvěma událostmi je nejkratší ve vlastní soustavě. Všude jinde se zdá, že doba uběhlá mezi počátkem a koncem tohoto děje je delší.**", což znamená, že tempo plynutí času je nejrychlejší v soustavě pozorovatele. Pak v této soustavě základního zvoleného Pozorovatele v jiných soustavách spojených s jinými pohybujícími se hmotnými objekty je tempo plynutí času pomalejší, ..čili pozoruje se (!) (ze základní soustavy základního Pozorovatele) delší časový interval mezi stejnými událostmi. (ač i „stejně události“ je sporný výrok).

1 Modern physics, for example Prof. Kulhanek, declares (I quote him) :

„ Time interval between two events is the shortest one in self reference coordinating system. Elsewhere time interval elapsed between beginning and the end of that process seems to be longer”. It means that rate of passage of time is the fastest in the observer's system. Then in this basic system of the chosen observer information from moving accelerating objects about their time flow is observed to be dilated. Longer time interval between otherwise same events is observed. (as even so called "same events" are disputable).

1. Modern physics, eg prof. Kulhánek, says that, I quote him: "The time interval between two events is the shortest in the system itself. Elsewhere, the time elapsed between the beginning and end of this event seems to be longer," which means that the rate of time is the fastest in the observer's system. Then, in this system of the basic chosen Observer in other systems connected to other moving material objects, the rate of passage of time is slower, i.e. a longer time interval between the same events is observed (!) (From the basic system of the basic Observer). (Although "the same events" is a controversial statement).

Which means that the pace of the passage of time is the fastest in the observer system. Then in this system of basic selected observer in other systems associated with other moving material objects, the pace of the passage of time is slower, it is observed (!) (From the basic system of the basic observer) longer time interval between the same events. (even "the same event" is a controversial statement).

2. Nutno znova zopakovat, připomenout si, že **každý** pozorovatel ve vesmíru (každá hvězda, stamiliardy hvězd) se může prohlásit za základního pozorovatele a tím pádem s nejrychlejším tempem plynutí času, čili každá hvězda může tvrdit, že na ostatních objektech (které pozoruje) je pomalejší tempo plynutí času...protože se pohybují vůči němu, neb on-Pozorovatel se pasoval do klidu. Pozorovatel se musí vždy pasovat do klidu...a u této soustavy pozorovat a vyslovovat **výroky**. To odpovídá fyzikálnímu procesu, který fyzikové nazývají STR ;

2. It is necessary to emphasize and recall that every observer in the universe (every star, hundreds of billions of stars) can declare themselves to be a basic observer and thereby to have the fastest rate of passage of time. Thus every star can declare that there is slower passage of time on the other observed objects because they are moving toward this reference star. Observer – static star – put himself into state without movement. Observer has to be always put into such state in order to observe and give out **statements**. It corresponds to the physical process which physicists call as a STR: (special theory of relativity)

2. It must be repeated, remembering that every observer in the universe (every star, hundreds of billions of stars) can declare himself a basic observer and thus with the fastest rate of passage of time, so each star can claim that on other objects (which he observes) is the slower pace of the passage of time ... because they move towards him, for he-the Observer fits into calm. The observer must always calm down ... and observe and make statements with this system. This corresponds to a physical process that physicists call STR;

3. Já jsem přesvědčen, že nejde "**o transformace**", jde ve své podstatě o pootáčení soustav, mezi soustavou Pozorovatele a soustavou pohybujícího se objektu, tj. při zvyšující se rychlosti (zrychlení) pozorovaného tělesa Pozorovatelem v jeho soustavě pozorovatele..., takže se „vlastní soustava“ tělesa pozorovaného pootáčí vůči základní soustavě Pozorovatele a tím se vysvětlí p o d s t a t a dilatace času i kontrakce délek, neboť tyto údaje Pozorovatel snímá jako pootáčené, pootáčené..., žádná "transformace".

3. I am convinced of “**transformations**” not to be transformations but indexing coordinating systems instead between system of Observer and accelerated system of moving object. “Self-system” of observed accelerated body is indexing towards basic Observer’s system and in this way it is possible to comprehend an *e s s e n c e* of the time dilatation and contraction of lengths. Data are scanned as indexed, it means that there is nothing like “transformation” there.

3. I am convinced that it is not a "transformation", it is essentially a rotation of systems, between the system of the Observer and the system of a moving object, ie with increasing speed (acceleration) of the observed body by the Observer in his system of the observer ..., so the "own system" of the observed body rotates relative to the basic system of the Observer and thus explains the essence of time dilatation and contraction of lengths, because these data the Observer reads as rotated, rotated ..., no "transformation".

4. Nezodpovězenou a záhadnou otázkou je, zda zdejší pozemské tempo plynutí času je **nejrychlejším tempem**, zda je toto, právě toto tempo nastaveno už ve Velkém Třesku a šíří se = plyne v celém vesmíru stejným (pozemským) tempem. (!) Já sám se nedokáži přiklonit ani k jednomu „tvrzení“ zda **a)** je zdejší tempo plynutí času stejné v celém vesmíru **b)**anebo může být jiné na jiných galaxiích, tedy na všech objektech ve vesmíru jiné. A dokonce zda se v historickém průběhu toku plynutí času od Třesku po dnešek toto tempo že se nemění (?) Nesmírná záhada. Pokud by tomu bylo tak, že v každé oblasti vesmíru (na každé galaxii) je jiné tempo plynutí času (jiné stárnutí), pak bychom dostávali odtamtud informace (ono zachycené záření s jeho rudým posuvem) v nedešifrovatelných stavech.

4. Unanswered and mysterious question is whether or not local earthly passage of time is indeed **the fastest one** thus whether or not very this passage of time is somehow set up already in advance, within the Big-Bang itself and spreads = unwinds in this rate everywhere in the universe.(?!). There are two different declarations there: **a)** local, earthly passage of time is uniform in whole universe or **b)** it can be different on other objects, other galaxies. I can’t attach myself to a) nor to b). I can’t attach myself even to statement that passage of time can differ historically on the same universe object in question. This is an immense mystery. If it would be such case that there would be different rates of passage of time in different areas of the universe (in every other galaxy) then we would get information (that detected red shifted radiation) to be in undecipherable states.

4. The unanswered and mysterious question is whether the local earthly rate of time is the fastest rate, whether this, this rate is already set in the Big Bang and is spreading = it flows in the whole universe at the same (earthly) rate. . And even whether, in the historical course of the flow of time from the Bang to the present day, this pace does not change (?) If it were so that in each region of the universe (in each galaxy) there is a different pace of time (different aging), then we would get information from there (the captured radiation with its redshift) in non-decipherable states.

4. An unanswered and mysterious question is whether the terrestrial pace of passing time is the fastest pace, whether this is this pace already set in a large bang and spreads = flows throughout the universe in the same (earthly) tempo. (?) I alone cannot be fed or to one "claim" if **a)** is the local pace of time the same throughout the universe **b)** or can be different on other galaxies, ie on all objects in the universe else. And even whether in the historical course of the flow of time from the bang after today, this pace does not change (?) The enormous mystery. If it was the case that in every area of the universe (on each galaxy) is a different pace of passing time (other aging), then we would get out of the information (it caught radiation with its red shift) in non-reblivable states.

5. Myslím je to nepravděpodobné. I když si nedovedu ani to představit „jak“ by vypadaly stavy-tvary pozorovaných galaxií když na každé z nich běželo jiné tempo plynutí času (?) Další otázkou je jak je toto tempo plynutí času ovlivňováno různou rychlostí expanze časoprostoru (po Třesku) byla **a)** fáze inflace, pak **b)** fáze ustáleného rozpínání a nyní, od 6 miliard let po třesku, je **c)** fáze zrychleného rozpínání *p r o s t o r u...?* (čili časoprostor se rozpíná jinak než prostor) Stále platí otázka "proč ty fáze" ?, a zda jsou už skálopevně potvrzeny, že to tak je, bylo. A stále platí, že se touto otázkou „určení“ „velikosti“ tempa plynutí času fyzikové nezabývali...anebo ano ?

5. I think that it is unlikely to be truth. I even can’t imagine of “how” observed galaxies would appear in their shapes and forms if passage of time differ (?). The next question is how this rate of passage of time is influenced by very fact of the space-time expansion (after Big-Bang) there was **a)** phase of inflation, then **b)** phase of steady expansion and now – since 6 billions of years after Big-Bang **c)** phase of accelerated expansion of the *s p a c e*? (Is space-time rate of expansion equal to that

of the space?). There is still an open question "why those phases". Are they really confirmed to be real or it is still just speculation? There is still one fact to be accounted that no physicist dealt yet with "determination of "rate" of passage of time... or so ?

5. I think it's unlikely. Although I can't even imagine "how" the states-shapes of the observed galaxies would look like if each of them ran a different pace of time (?) Another question is how this pace of time is affected by different rates of space-time (expansion phase of inflation), then a) phase of steady expansion and now, from 6 billion years after the bang, is c) phase of accelerated expansion of space...? (that is, space-time expands differently than space) The question "why the phases" still apply, and whether they are already rock solidly confirmed that this is the case, was. And is it still true that the question of "determining" the "magnitude" of the rate of passage of time has not been addressed by physicists... or has it?

6. Nabízí se ještě úvaha, jiná, že : pokud se vesmírný prostor 3D rozpíná do tří dimenzí, ať už zrychleně nebo rovnoměrně či inflačně, tak se rozpíná „kulovitě sféricky“ do těchto tří os „od **bodu** Velkého Třesku“. Je nepravděpodobné že by se rozpínal hala-bala na každou stranu jinak, do každé osy jinak, a jiným tempem. Takže sféricky rovnoměrně do 3D.

6. Another thought can be taken regarding this: if 3D space is expanding into its three dimensions no matter of whether with acceleration, equally or with inflation it has to be expanded "spherically" into these three axes, "from the **point or moment** of the Big-Bang". It is unlikely to be expanded chaotically and randomly in different rates into 3D.

6. Another consideration is that if 3D space expands into three dimensions, either accelerated or uniformly or inflationary, it expands "spherically spherically" into these three axes " **from the point** of the Big Bang." It is unlikely that the hala-bala would expand on each side differently, on each axis differently, and at a different pace. So spherically evenly into 3D.

7. Potom při úvaze třídimenzionálního času by bylo „rozpínání“ času podobné, sférické, do tří dimenzí času . Proč ne ? Kdo to zakázal ? Tok času-rozpínání času jedním směrem (do tří časových dimenzí) je ve své podstatě stejné rozpínání prostoru, také jen jedním směrem na každé dimenzi >dopředu< ; dozadu se prostor nerozpíná, stejně jako čas. Každý bod v prostoru se "rozpíná" rychlostí světla. (((Kvasar na konci pozorovatelného vesmíru pozoruje nás-Zemi že se pohybujeme sktorychlostí světla od něj ...každý bod pozoruje jiný bod "na konci pozorovatelnosti" že se od sebe vzdalují rychlostí světla - - ale to je jen to pootáčení soustav, celý vesmír se křiví, ohýbá, zakřivuje, není euklidovský..., pozorujeme rudým posuvem jakési dilatace či kontrakce a ono to je jen "zatáčení samotného časoprostoru" na velkých škálách ...atd. atd. v jiných pasážích úvah)))

7. It would be similar to admit that time as physical quantity has got also three dimensions collateral with those of time . Time would also expand into its three dimensions. Why not? Who forbade it? Time flow – its expansion in one direction (alongside its three dimensions) is analogous to that of space, time is expanding in the same manner like space also only >forward<; Space is not expanding backwards either time so. Every point in the universe "is expanding" by speed of time. (((Quasar at the end of the observable universe can observe us – the Earth – as an object drawing apart from him by nearly speed of light. ... every point observes another point "at the end of observability" to be drawing apart by speed of light – but this is but indexing of coordinating systems. Whole universe curves, bends itself, it is not Euclidean. We observe some dilatations or contractions of which base is nothing else but "curving – cornering of very space-time on the very big scales etc. But this will be discussed later)))

7. Then, considering three-dimensional time, the "expansion" of time would be similar, spherical, to the three dimensions of time . Why not ? Who banned it? The flow of time-expansion of time in one direction (into three time dimensions) is essentially the same expansion of space, also only in one direction on each dimension> forward <; in the back, space does not expand, as does time. Every point in space "expands" at the speed of light. (((Quasar at the end of the observable universe observes us-Earth that we move at the speed of light from it ... each point observes a different point "at the end of observability" that they move away from each other at the speed of light - - but that's just the rotation of systems, the whole the universe curves, bends, curves, it is not Euclidean ..., we observe by a redshift a kind of dilation or contraction and it is just a "turning of space-time itself" on large scales ... etc. etc. in other passages of reasoning)))

8. Námitky oponentů budou znít : jenže tělesa v libovolném místě časoprostoru se mohou pohybovat „dopředu“ a „dozadu“ po téže dimenzi ze tří dimenzí Ale ...ale to není pravda, pokud se vesmír rozpíná !!!!!!!!!, a za na hranici pozorovatelnosti dokonce rychlostí světla. Proto žádné těleso se „se zpátečním“ pohybem nemůže dostat na stejné místo, kde bylo „před zpátečním pohybem“.

8. Objections of opponents can be of that kind that bodies at any place of space-time can move both directions “forward” and “backward” alongside the same dimension of three ones. But... but it is not truth if universe is expanding!!!!!!!! And at the line of observability even by speed of light. Therefore no physical body moving “backwards” cannot get itself into initial position where it was before “backward movement”.

8. Opponents' objections will be: but bodies in any place in space-time can move "forward" and "backward" along the same dimension of the three dimensions But... but this is not true if the universe expands !!!!!!!!!, and that at the limit of observability even at the speed of light. Therefore, no body with a "reverse" motion can get to the same place where it was "before the reverse motion".

9. Budeme-li sledovat auto, které stojí na parkovišti, a které v jistý okamžik se rozjede směrem „doprava“, tak po libovolné době, když se otočí a pojedje zpět na to samé parkoviště, se nedostane na **stejné původní místo** i kdyby zaparkovalo na milimetr přesně stejně...protože...protože ...protože se celá zeměkoule vesmírem pohybuje (!) a tak „výchozí“ místo toho stojícího auta nelze zpětným pohybem dosáhnout.

9. Let's follow movement of the car that initially stood at certain place at the car park. The car had chosen any direction or, let's say, trajectory of its motion. After any length of time it had chosen the same or different trajectory to get itself back at the exactly same place where it was before. But **exactly same place** – point like position already doesn't exist because whole planet is moving through the universe also whole galaxy does. Starting point of previously standing car disappeared and became unrepeatable.

9. If we follow the car, which is in the parking lot, and which at a moment he starts towards "right" and after any time, when he turns and go back to the same car park, he won't get **the same original place** even if he parked On the millimeter exactly as ... because ... because the entire globe is the universe moving (!) and the "default" instead of a standing car can not be reached by reverse movement.

10. "Dopředný" pohyb auta spolu se zeměkoulí a spolu se sluneční soustavou a spolu s celou galaxií, je natolik >rychlý<, že odečtení "zpětného" pohybu auta proti globálnímu pohybu, proti globálnímu celovesmírnému rozpínání je neměřitelně malý ! **Takže neexistuje pohyb „dozadu-zpět“ po délkové dimenzi přesně !!!!!!!!! stejné !!!!! podobně !!!!! jako neexistuje zpětný chod času, jde jen jedním směrem,**

10. “Feed forward” progression of the car including motion of the Earth, solar system and whole galaxy is so >fast< that subtraction of “the backward” car motion against global motion, against global whole-universe expansion is but immeasurable! **So that there doesn't exist movement “rearward-backward” alongside length dimension to be exactly same or similar in the same way like there doesn't exist backward passage of time, time is progressing only in single direction.**

10. The "forward" movement of the car together with the globe and along with the solar system and along with the entire galaxy, is so >fast< that subtracting the "backward" movement of the car against global movement, against global duty expansion is immortably small! **So there is no movement "back-back" along the length dimension exactly !!!!!!!!! Same !!!!! Similarly !!!!! like there is no time reverse running, goes only one way.**

11. respektive existuje zpětný chod po délkové dimenzi ale stejně tak i po časové dimenzi : zpětné plynutí času, ale jen na Planckových škálách anebo spíš ještě menších škálách : tam se „rodí“ časoprostorová pěna, a v ní vlnobalíčky z dimenzí délkových a časových a v tom vlnobalíčku je-existuje zakřivení času na malý úsek „zpětné“, čas tam plyne zpět, ale jen na malílinký úsek. To v pění čp i v tom vlnobalíčku. Podobně je to s tím autem, co opustilo parkoviště : kdyby ho pozoroval kvasar, řekl by, že auto se vzdaluje **od něj** rychlostí téměř světla a „zpětný pohyb“, tedy **k němu** (ke

kvasaru) je tak nepatrně malý (při odečtení pohybu auta z Prahy do Brna od rychlosti světla), že je to nepozorovatelné.

11. Let us say there exists reversal progression along length dimension either time dimension but purely only on the Planck's scales or even smallest ones. There and only there so called space-time foam is produced or created and wave-agglomerations from length and time dimensions within that process occur in which curvature of time is pointing backwards but only for very tiny interval. Similar it is with the car leaving car-park. If that car would be observed by quasar he would say that car is moving **apart from him** by nearly speed of light and range of "reverse motion" **toward him** (toward quasar) is tiny, immeasurable and unobservable. (After subtraction movement of the car from Prague to Brno from speed of light.)

11. Respective There is a reverse run along the length dimension, as well as after a time dimension: Reverse passage of time, but only on Planckových scales or even smaller scales: there "Bodies = produces" space-time foam, and in it wavelobes from dimensional dimensions. Time and in the waveband is a curvature of time to a small section "reverse", time there will be back, but only on a small-scale section. Similarly, it is with the car, what has left the parking lot: If he watched Kvasar, he would say that the car will move away from him at the speed of almost light and "backward movement", that is so slightly small (when deducting the car movement From Prague to Brna from the speed of light), it is unnoticeable.

12. To samé s tím časem "proč" nepozorujeme zpětné intervaly času do tří dimenzí, respektive jen do jedné dimenze při "jednom pohybu vesmírem". Takže zopakujme : pohyb Země (tedy autíčka na parkovišti) vesmírem **je jen „dopředu“** po třech dimenzích a...a pokud se autíčko rozejde, „dopředu“, je odpočet od pohybu „dopředného“ nesmírně malý, kvasar to nepozoruje (i v rámci globálního rozpínání prostoru).

12. It is the same matter with time "why" we can't observe reverse intervals of time into three dimensions or just into one of them at "one certain movement through the universe". Thus let's repeat again: Motion of the Earth (thus a car at car park respectively) through the universe **is only "forwardly"** along with three dimensions and ... and if the car starts moving "forward" difference from the "forward direction" is immensely small.. Quasar will not observe it. (even in the frame of the global space expansion).

12. The same with the time "why" do not observe the time back intervals into three dimensions, respectively only into one dimension at "one motion of the universe). So repeat: Earth movement (ie cars in the parking lot) by the universe is just "forward" after three dimensions And ... and if the toy car starts, "ahead", is a deduction from moving "forward" extremely small, Kvasar does not observe it (even in the global space expansion).

13. Přesně podobně je to s časem : **čas „teče“ do tří směrů stejným tempem** (dle rozpínání času od Třesku), že teče, plyne, stárne, tiká, běží, znamená r o z p í n á n í času nějakým základním tempem jako, přesně podobně jako r o z p í n á n í 3D prostoru. Je to naprosto stejný *kužel* rozpínání a...a zpětný tok času nepozorujeme (oproti tomu autu, které stálo na parkovišti a pak se rozejelo) nepozorujeme už i proto, že my-lidé jsme od „hlavní osy“ rozpínání vesmíru *>odchýlení<* o 8 řádů. $c = 10^8 / 10^0$; ano, my lidé vnímáme zcela jinak „metr“ než „sekundu“. To je velmi zajímavé. O osm řádů je ten "náš lidský" vjem citlivější na vzdálenost-úsečku než na časový interval-sekundu.

13. Exactly same situation is with that of time: **time "flows "into three directions in identical rates** (according to **expansion** of time since Big-Bang). Time is flowing, streaming, ageing, ticking, running, it means that e x p a n s i o n of time has some basic rate set up in advance exactly similarly to e x p a n s i o n of 3D space. It is concerning utterly the same *cone* of expansion and reverse passage of time we can't observe (in comparison to that car that stood at the car park and then started up). We can't observe it even because of to be placed for 8 orders far apart from "main axis"of expansion of the universe. We are *>deviated<* for 8 orders of how we perceive length related to time $c = 10^8 / 10^0$; Yes, we humans are perceiving entirely differently "one meter" and "one second". It is very interesting. For 8 orders "our human kind of perception" is more sensitive for the length than for unit of time interval which is one second.

13. It is exactly the same with time: time "flows" in three directions at the same rate (according to the expansion of time since Bang), that it flows, flows, ages, ticks, runs, means the expansion of time at

some basic pace as, exactly like expanding 3D space. It is exactly the same cone of expansion and... and we do not observe the backflow of time (as opposed to the car that stood in the parking lot and then drove off) no longer because we humans are >deviated< by 8 orders of magnitude from the "main axis" of space expansion $c = 10^8/10^0$, yes, we humans perceive a "meter" completely differently than a "second." This is very interesting, and by eight orders of magnitude, "our human" perception is more sensitive to distance-line than to time-interval-second.

14. A ještě pozoruhodnější je názor, že připustíme-li tři dimenze času (řekněme mu "časor") jako má 3 dimenze "prostor", pak vlastně čas neplyne nám-lidem, ale my-lidé "plyneme" jemu! což znamená, že my-hmotné objekty-body p u t u j e m e po časové dimenzi, po třech časových dimenzích !!!!, časoprostor je "sít" 3+3 dimenzionální a hmotové objekty se posouvají nejen po délkové dimenzi tak, že ukrajují intervaly, ale i po časové dimenzi na níž ukrajují intervaly... jakoby časová dimenze ""stála"" a my plynuli po ní. Dtto s dimenzí délkovou, ta "stojí" a my se posouváme po délkové dimenzi a ukrajujeme na ní intervaly.

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14. And even more remarkable one is an opinion that if we admit existence of three dimensions of time (let's name it as timeon – three dimensional only global particle of time) in similar meaning of that of the space then as a matter of fact time doesn't flow towards us but contrary we are "flowing" toward time. It means that we- mass objects – mass points are w a n d e r i n g along time dimension or better to say along all three time dimensions at the same rate !!!!. Space-time is a net of 3+3 dimensional and mass bodies are slipping along both length dimension by cutting off intervals and time dimension by cutting off intervals also. It is as if time dimension ""stood still"" and we slipped alongside. The same with length dimension. It "stands still" and we are slipping along length dimension and cutting off intervals.

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14. And even more remarkable is the view that if we allow three dimensions of time (let's call it "time") as the 3 dimensions of "space" have, then in fact time does not flow to us-people, but we-people "flow" to it! which means that we-material objects-points travel along the time dimension, after three time dimensions !!!!, space-time is a "network" of 3 + 3 dimensional and material objects move not only along the length dimension so that they cut intervals, but also after the time dimension on which the intervals cut ... as if the time dimension "" stood "" and we flowed on it. Dtto with the length dimension, the "stands" and we move along the length dimension and cut the intervals on it.

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