

So let's continue.

Besides [to the post above]: this

*“...In standard SR this comes from the Lorentz factor:  $\Delta t = \Delta t_0 / \gamma \approx \Delta t_0 (1 - v^2/2c^2)$   $\Delta t = \Delta t_0 / \gamma \approx \Delta t_0 (1 - v^2/2c^2)$ . In the PSIP model, Shevchenko explicitly rejects SR and the Minkowski spacetime metric  $(ict, X, Y, Z)$  replacing it with  $(c\tau, X, Y, Z, ct)$ . He claims SR time dilation is an artefact of using the wrong spacetime metric. But he provides no alternative equation for how moving clocks slow down in his framework for orbital velocities. ....”*

- looks as too strange at all. In the pointed SS post the Matter's spacetime **metrics** relates to cosmology, and by no means to the SR kinematic “time dilation” problem.

Though the metrics indeed is fundamentally important in kinematics as well; **really absolutely fundamentally cannot be any “time dilations”**, while:

- why and how in moving in **absolute 3D space** particles [bides..] intrinsic processes are **really slowed** [and lengths are **really contracted** along the motion direction], and why so the **measured in moving reference frames values** of the slowing / “time dilation” and length/ “space” contraction values, despite that are unreal, are, nonetheless, adequate to the reality,

- all this above is rigorously explained in other SS posts, in details in <https://www.researchgate.net/publication/391209088> The Informational Conception and Basic Physics :

- the processes are really slowed [in Lorent factor] since at motion in 3DXYZ space 4D particles-algorithms are “diluted” by “blank” 3D space FLE flips; moving along X-axis in 4D space 4D **rigid** body/system of bodies really rotates in the  $(X, c\tau)$  plane, so its really experimentally observable 3DXYZ projection is really contracted in Lorent factor, and the body's front end is “younger” than the back end on the Voigt-Lorentz decrement  $-Vx/c^2$ . All the above is by Pythagoras theorem.

These real effects values, if are measured in moving with unknown now velocities in 3DXYZ space IRFs, despite that are unreal, are adequate to the reality since Lorentz transformations form the Poincaré group, and so the IRFs are traceable to each other, including to absolute frames;

- **while all this above by no means requires postulating that the absolute Matter's spacetime doesn't exist..**

Etc., more see SS posts above and links in the posts.

Cheers

<https://www.researchgate.net/post/Does-a-gravitational-field-have-energy-density-like-an-electric-field/222> \*\*\*\*\* ##-18-05-26, page 222

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This passage

*“...We know that the corrections used for the clocks on GPS satellites makes them interact properly with people on earth that use their services. These corrections were calculated from mainstream theory and are a combination of gravitational effects and the special relativity (SR)*

*effect... How does a person that does not believe SR explain the success of GPS systems when knowing that SR was used for part of the calculation that produced this success? ...”*

- looks as rather, if too , strange in this thread. In SS posts above in the thread a few times it is written that internal/intrinsic processes in moving in absolute  $3D_{XYZ}$  space having rest mass particles and systems of the particles, including clocks [further “particles”] are slowed in Lorentz factor.

**As that is in SR** as well, however that in PSIP model is in fundamental contrast to the SR as that this slowing is caused not by the mystic SR’s “time dilation”, but since at the motion really  $4D_{ctXYZ}$  particles- algorithms are diluted by blank 3D space FLE flips, so whole algorithms logical lengths become be longer in Lorentz factor, and so the algorithms tick slower in this factor. So, say, if a particle’s algorithm has some defect, and so at every tick the algorithm can brake with a constant probability – so the particle decays – such moving particle lives longer in Lorentz factor. **At that fundamentally nothing happens with time.**

Though this really is rather inessential at GPS clock correction – see Kurt Klingbeil/AI post on page 221, 5 days ago now - Gravitational time dilation (General Relativity):  $\approx +45.9 \mu\text{s/day}$  ; (Special Relativity):  $-7.2 \mu\text{s/day}$ .

At Pound-Reka 1960s experiments, and in till now mental proposed in 2015 SS&VT PSIP model experiment, contribution of the “SR-effect” is also well lesser of - not, of course, some mystic “gravitational time dilation”, but since if a particle that has rest mass  $m$  is in a **fundamental Nature Gravity force** field, its internal/intrinsic processes rate in weak Gravity field of a large mass,  $M$ , are slowed relatively to free particle rate on its gravitational mass defect,  $\Delta m$ , as  $\Delta m/m$ .

If two particles are in different points divided by a height  $h$ , this relative rates difference is, if particles **are falling freely** -  $gh/c^2$  in both - GR ad PSIP model,

- **while at statics** it is  $gh/c^2$  in GR – as that is measured in GPS and Pound-Reka experiments; and -  $gh/2c^2$  in PSIP model.

Nonetheless **in PSIP model** the GPS clocks correction and Pound-Reka experiments results are  $gh/c^2$ , **since in this case the sum of contribution of two real fundamentally different effects is measured** – gravitational  $gh/2c^2$  ; and relative equally  $gh/2c^2$  changes of radio photons frequency at GPS Earth-orbit communications , and when FE-57 gammas loose/gain energy/frequency moving up and down in Pound-Reka’s tube.

Again, **to test experimentally what is really just only Gravity effect**, it is necessary to **measure only just the Gravity effect**, what is proposed in the 2015 two clocks experiment <https://www.researchgate.net/publication/277710038> The informational model - gravity a next experiment [really that was proposed by Clifford Will in 1986, however later he didn’t mention this in his publications ]

Again, since in the experiment it is enough to use clocks having precision  $\sim 10^{-15}$ , now that are quite ordinary clocks, the experiment can be made in a week with  $\sim \$200000$  cost; if an institution has two clocks – in  $\$2000$ .,

- so it looks as that rather probably it was made, but the result didn’t confirm GR, and so such confirmation, despite that would be well **more rigorous confirmation than any other one**, isn’t in mainstream confirmations lists.

At that, again, if the measured difference will be  $gh/2c^2$ , this would be complete substantiation for making other really fundamental experiment [seems a few tens of \$1000000], where quantum nature of Gravity can be observed, see proposed in 2007 experiment in <https://www.researchgate.net/publication/215526868> *The informational model - possible tests*, section 2.1.2 “Monochromatic photon beam distortion”.

Cheers

<https://www.researchgate.net/post/Does-a-gravitational-field-have-energy-density-like-an-electric-field/222> \*\*\*\*\* ##-22-05-26, page 222

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From a next Perplexity’s again really rather strange analysis of last SS posts [page 222] follows that she till now really has rather poor “knowledge” about what physics is, – and so what is she writes about in this case.

In whole long text only one position has a real sense – that an attempt to measure just “gravitational time dilation” only by clocks and so without exchange by photons was made in 1972C Hafele and R E Keating experiment [that was in first Kurt Klingbeil post version, but later/now disappeared ], but this experiment data can be erroneous, while in any real science, including physics, some experiment data are recognized as correct ones only if the experiment was repeated – and the same data were obtained - in a number of other independent laboratories . However the experiment above remains be unique, despite that, again – if an University has a couple of transportable clocks with precision  $10^{-15}$ , that could be a laboratory work of magister course students.

In the “analysis” large place is occupied by really rather strange addressing to SR, when in the SS posts is quite clearly pointed that in this case, including in Pound-Reka’s/GPS, the SR affects on the “gravitational time dilation” measurements quite negligibly.

As well this

*“...modern tests of GR are—Shapiro delay, binary pulsars, gravitational waves, satellite geodesy, optical clocks in Earth’s field...”*

- has rather indirect relation to the “gravitational time dilation” problem, in these experiments the problem is hidden well more than **in direct Pound-Reka’s/GPS photons frequency observation**; while this

*:...—it is extremely implausible [(!)] [that a cheap tabletop test falsifying GR at the level of gravitational redshift would be silently performed and buried while more expensive tests continued to confirm GR elsewhere....”*

- is evidently too strange “substantiation” of the inference that the proposed in PSIP model experiment above is something that is scientifically wrong.

So from this “substantiation” in the analysis’s texts after the passage above :

*“...So this is not a critique of GR; it is an unsupported conspiracy-like inference based on “it would be easy, therefore they must have done it and hidden it. ....”\*

- again follows that the AI rather strangely understood what is written in the SS posts, where, including quite clearly and numerously it is written, that PSIP model’s and Pound-Reka’s/GPS

experiments difference of relative **clocks tick rates at clocks free fall falling are the same -  $gh/c^2$**

[though observed at two GPS clocks/ Pound-Reka's tube free falling difference would be measured  $3/2gh/c^2$ – as that is in the PSIP model would be  $gh/c^2$ , if photons interact with Gravity field, as that PSIP model predicts, however such experiments weren't made since are unreal],

But **at statics** in the model this difference – in centrist tio GR - is twice lesser,  $gh/2c^2$  , **since, again, at statics the gravitational mass defect is divided equally between Earth and clocks.** As that happens, say, at **also fundamental Nature Electric force** action, say, when an electron moves to a proton, when it occurs on the H-atom S orbital ,

-it has energy  $E=27.2$  eV, but when it form with proton “static” H-atom, since it cannot transmit to proton corresponding  $1/2E/c^2$  electric mass defect; and so this portion escape from whole H-atom system as 13.6. eV photon; and the system's mass defect [ practically whole of electron] – is 13.5 eV

**Again - practically for sure the same happens if a small mass at free falling in Earth Gravy field, stops and fixes, it without problem transmits [to Earth half of its gravitational mass defect – as tha so is in PSIP model, while**

so , if this will be experimentally, again – quite easily - obtained, than **from the Pound-Reka's/GPS experiments data the well fundamental inference follow– that photons interact with Gravity fields;** etc., more see the last SS posts above., including that this experiment result would be rigorous ground for making more fundamental 2007 experiment in [https://www.researchgate.net/publication/215526868\\_The\\_informational\\_model\\_-\\_possible\\_tests](https://www.researchgate.net/publication/215526868_The_informational_model_-_possible_tests) , section 2.1.2 “Monochromatic photon beam distortion”.  
, where quantum nature of Gravity well so possibly will be observed

Cheers

<https://www.researchgate.net/post/Does-a-gravitational-field-have-energy-density-like-an-electric-field/223> \*\*\*\*\* ##-25-05-26, page 223