California Wildfires and 9/11 similarity: Directed energy weapon or Witchcraft pact with devils?

Dmitri Martila

Former researcher at Physics Institute,

*University of Tartu, Ülikooli 18, 50090 TARTU, Estonia**

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Abstract

1. Solved the Millennium Prize problem: proved inconsistency of Navier-Stockes fluid and of the perfect fluid. 2. By recalling the importance of Inertial Tetrads (the inertial coordinates) is perfectly solved the Energy Localization problem in General Relativity while introducing virtual matter in actual-virtual matter joint conservation. 3. Solved the mystery of the Dark Matter and the Dark Energy: it is the virtual matter, not the actual (baryonic) one! It is not being directly measured; for example, an actual book on the table can be taken by an invisible virtual hand: the motion of the book can be measured, but the hand cannot be seen: "If there were an invisible cat in that chair, the chair would look empty; but the chair does look empty; therefore there is an invisible cat in it." C.S. Lewis.

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*Electronic address: eestidima@gmail.com

I have papers in Physical Review E, European Journal of Physics B, etc. Because in General Relativity the Universe is four-dimensional spacetime, one cannot destroy anything inside the Universe. My academic activity is forever in there. Moreover, due to the "relativity of simultaneity" our free-willing actions can not change the course of history: we write history, without ever rewriting it [1]. Because our current actions are the happened past for some observers. And an observer, who has experienced all history changes (by time-travellers), will remember all these changes: so an observer's past can not be changed (just like the proper time in Einstein Relativity, the proper history as inner characteristic of people is invariant-unchangeable)! Simply said, if the Absolute Truth about the Holocaust could be changed, then the Absolute Truth is not invariant; thus, it is not the Absolute Truth. We came to contradiction, thus, the history (neither past nor future of it) can not be changed. Please, feel personal connection to your blood-brother's CV, we all have common ancestors: Mitochondrial Eve and Y-Chromosomal Adam [3, 4].

I. INTRODUCTION

The first naming of a violation of a global scale conservation law in a physical theory is found in Ref. [6]. Therefore, the energy violation is published in a highly renowned journal. A consideration of Outlaw Physics accompanies the cold fusion E-cat [7] and the self-propulsion Em-drive [8]. People have also said that there is no Earth, because "the Universe should not exist" [9]. In this we see how the Academic Science destroys itself [10, 11]. But below are solved some major problems, in first hand the mystery of the Dark Matter and the Dark Energy: it is the virtual matter, not the actual (baryonic) one! It is not being directly measured; for example, an actual book on the table can be taken by an invisible virtual hand: the motion of the book can be measured, but the hand cannot be seen [12]. The "Dawn of Q-Science" I am talking about is predicted in the Star Track science fiction serials as inclusion of an omnipotent character into the reality of current time, named simply by "Q". Driven by Ref. [6] and many other works, the author uses the standard mathematical framework and proves the existence of a division of real (i.e., existing) matter into actual and virtual parts, and the non-conservation of actual matter measurables (e.g., the energy). While in Ref. [6] the existing theories are modified to achieve global-scale energy violation, in this contribution theories are not modified and considered at a local scale. The division is

necessary throughout the history of Universe. Otherwise the current academic physics has no self-consistent mathematical framework.

So, without the division of matter into notationally actual and virtual parts one rejects the Physics Postulates and the Tradition of Centuries of Scientific Search. Researchers are used to the word "virtual": virtual reality, virtual particles (even in nearly perfect cosmic void [14]). We define the virtual matter as a thing [15] which influence on actual matter can be measured, but itself cannot be detected by Physical Instruments (recall the fruitless attempts to detect Dark Matter particles [16]).

Matter bends space and therefore bodies fall. So why do bodies fall in a glass flask from which air is pumped out? It is obvious that the space in this place has curvature, even in the absence of matter. Here we come to the concept of Dark Matter: it is a curvature of space in the absence of matter in it. Such a curvature can lead to a nonzero Ricci tensor. In Einstein's theory, the Ricci tensor is equal to matter, which is absent. Then we call such a Ricci tensor "virtual matter". It is not being directly measured.[42].

Recently, there has been found two galaxies without Dark Matter [17], rising the question again about the meaning of Dark Matter in cosmology. There is an influence of Dark Matter in cosmology, but Dark Matter itself is not detected. It has no material interactions (neither strong nor weak nor electromagnetic) with actual baryonic matter. Note that even being a natural interaction [18], gravity is not a material interaction, as it is not a force field in General Relativity: a free-falling body feels not a force but the weightlessness. The action of Dark Matter and Dark Energy is without actual source: no Dark Matter was practically observed at CERN or sensitive underground detectors. Moreover, all theoretical candidates fail [16].

In the following only "actual" matter is meant under word "matter" in exception the cases of using word "virtual". By several examples the author proves self-inconsistency of actual matter, which is made consistent by addition of virtual matter: Eq. (30).

II. DARK ENERGY VIOLATES THE LOCAL ENERGY CONSERVATION

In the inertial tetrad (the definition of it is found below) with four-dimensional velocity u^μ, the Dark Energy density is measured to be

$$\rho = T_{\mu\nu}\, u^\mu u^\nu = -\Lambda g_{\mu\nu}\, u^\mu u^\nu = \Lambda = \text{const}\,. \tag{1}$$

Here and in the following a summation over repeated index pairs is understood, the so-called Einstein Rule of Summation. For a small laboratory with a coordinate volume ΔV, the total energy is given by [19]

$$E = \rho \sqrt{-g}\, \Delta V \,. \tag{2}$$

Therefore, the ratio

$$\frac{E_0}{E} = \frac{\sqrt{-g_0}}{\sqrt{-g}} \tag{3}$$

with E_0, g_0 taken at initial moment $t = t_0$, shall go to 1 for $\Delta V \to 0$, if the conservation of energy is given. But in case of an expansive Universe one obtains

$$\frac{E_0}{E} = \left(\frac{a_0}{a(t)}\right)^3 \neq 1 \,, \tag{4}$$

where a is the scale factor. [20]

A. Universe

Consider the closed Friedmann Universe with metric

$$ds^2 = -dt^2 + a^2 \left(dr^2 + \sin^2 r \left[d\theta^2 + \sin^2\theta \, d\phi^2\right]\right) , \tag{5}$$

where the scale factor is given by $a = a(t)$. From this metric and the Einstein equations in the presence of Dark Energy ($\Lambda \neq 0$)

$$G^\nu_\mu + \Lambda \, \delta^\nu_\mu = 8\pi \, T^\nu_\mu \tag{6}$$

one obtains that any kind of matter must satisfy the equation

$$T^\nu_\mu = \mathrm{diag}(\rho, p, p, p) \,. \tag{7}$$

The local conservation of energy (the formalism is written above) requires

$$\rho = \rho_0 \left(\frac{a_0}{a}\right)^3 . \tag{8}$$

Therefore, from $T^\nu_{\mu\,;\nu} = 0$ we conclude the equation of state $p = 0$ [43]. Therefore, the only possible tensor in the inertial tetrad is the dust tensor. But that is not possible, because due to the strong equivalence principle, the curvature of spacetime does not alter the physics in a small free-falling inertial laboratory. Therefore, for a Universe filled with fluid ("perfect" or viscous, or simply with any isotropic matter), the mathematically consistent state is dust. Therefore, as a solution we propose to include virtual matter [44], and to include Dark Matter [21].

III. ENERGY-MOMENTUM LOCALIZATION IN GENERAL RELATIVITY

I believe that there is a correct derivation of the obvious fixation of the Celestial Pole (during a one-year period) within the formalism of General Relativity (see e.g. Ref. [23]). But perhaps I can show it in a more simple way. In the inertial coordinate system ICS co-moving with the Earth, all the Christoffel symbols $\Gamma^{\nu}_{\alpha\,\beta}$ are zero. Thus, the covariant derivative turns to an ordinary derivative (in relation to the co-moving coordinate system), and the angular moment has the same orientation to the ICS. But how to orient the system ICS itself?

The spatial direction (as a "line segment") in our free ICS is $L^{\hat{\nu}} = (0,\, \Delta x,\, \Delta y,\, \Delta z) = \text{const}$, but here we can take any constant vector or pseudo-vector with physical sense. In curvature coordinates one has $L^{\mu} = e^{\mu}_{\hat{\nu}}\, L^{\hat{\nu}}$. Does this mean that the direction is conserved,

$$\frac{D\, L^{\mu}}{d\tau} = 0\,? \tag{9}$$

If the answer is affirmative, then indeed $L^{\hat{\nu}} = (0,\, \Delta x,\, \Delta y,\, \Delta z) = \text{const}$ along the ICS system flight. Actually, this holds, as the tetrad vectors $e^{\nu}_{\hat{\mu}}$ are all geodesic vectors in an inertial ICS system:

$$\frac{D\, e^{\nu}_{\hat{0}}}{d\tau} = \frac{D\, e^{\nu}_{\hat{1}}}{d\tau} = \frac{D\, e^{\nu}_{\hat{2}}}{d\tau} = \frac{D\, e^{\nu}_{\hat{3}}}{d\tau} = 0\,. \tag{10}$$

For instance, one has [27]

$$\frac{D\, e^{\nu}_{\hat{3}}}{d\tau} = \frac{d\, e^{\nu}_{\hat{3}}}{d\tau} + \Gamma^{\nu}_{\mu\,\alpha}\, e^{\mu}_{\hat{3}}\, u^{\alpha}\,, \tag{11}$$

where u^{α} is the four-dimensional velocity of ICS.

Working in the Schwarzschild metric, I have managed to find the following co-moving coordinates which are indeed able to show on the North Star area:

$$e^{\hat{t}}_{\mu} = \Big(\frac{4\sqrt{70}}{35}, 0, 0, -\frac{10}{\sqrt{7}}\Big)\,, \quad e^{\hat{r}}_{\mu} = \Big(\frac{2}{\sqrt{35}}\cos(w\,\tau),\, -\frac{\sqrt{5}}{2}\sin(w\,\tau),\, 0,\, -\frac{20\sqrt{14}}{7}\cos(w\,\tau)\Big)\,,$$

$$e^{\hat{\theta}}_{\mu} = (0,\, 0,\, r,\, 0)\,, \quad e^{\hat{\phi}}_{\mu} = \Big(\frac{2}{\sqrt{35}}\sin(w\,\tau),\, -\frac{\sqrt{5}}{2}\cos(w\,\tau),\, 0,\, -\frac{20\sqrt{14}}{7}\sin(w\,\tau)\Big)\,, \tag{12}$$

where $w = \sqrt{10}/100$, $M = 1$, $r = 10 = \text{const}$.

A. Synge argument explaining Dark Matter and Energy

In this section, the word "matter" means matter in general (i.e. without specification of actual and virtual matter), whereby Eq. (30) holds.

In the known "Synge argument" (often used in the traversable wormhole theory [1]) we fix the background spacetime and, thus, remain with

$$T^{\nu}_{\mu\,;\nu} = 0\,, \tag{13}$$

as four matter-gravity equations. We can freely choose any spacetime anomalies, including Dark Matter, Dark Energy, and even smooth corrections for singularities (Big Bang, Black Holes) [24]. This is a great simplification, as the Einstein equations consist of ten second-order partial nonlinear differential equations, while only four first-order differential equations are found here without any need of hypothetical "exotic matter" (or any other actual matter).

We can open Eq. (13) like in Ref. [19] to obtain

$$T^{\nu}_{\mu\,;\nu} = \frac{1}{\sqrt{-g}}\,(T^{\nu}_{\mu}\,\sqrt{-g})_{,\nu} - \frac{1}{2}\,g_{\nu\,\alpha\,,\mu}\,T^{\nu\,\alpha} = 0\,. \tag{14}$$

According to the "strong equivalence principle", nature should conserve energy and momentum inside a small laboratory. One has in general $(T^{\nu}_{\mu}\,\sqrt{-g})_{,\nu} \neq 0$ [19]; and from the Gauss theorem one conludes [19]

$$\int T^{t}_{\mu}\,\sqrt{-g}\,dV = \int (T^{\nu}_{\mu}\,\sqrt{-g})_{,\nu}\,dt\,dV + \text{const}\,, \quad \mu = t, 1, 2, 3\,. \tag{15}$$

Using Eq. (14) one has

$$\int (T^{\nu}_{\mu}\,\sqrt{-g})_{,\nu}\,dt\,dV = \frac{1}{2}\int g_{\nu\,\alpha\,,\mu}\,T^{\nu\,\alpha}\,\sqrt{-g}\,dt\,dV\,. \tag{16}$$

Therefore, for energy momentum to be conserved in the limit $\Delta V \to 0$ one obtains

$$\frac{\Delta V\,\int g_{\nu\,\alpha\,,\mu}\,T^{\nu\,\alpha}\,\sqrt{-g}\,dt}{\Delta V\,T^{t}_{\mu}\,\sqrt{-g}} = 0\,, \tag{17}$$

or

$$\int_{0}^{t_f} g_{\nu\,\alpha\,,\mu}\,T^{\nu\,\alpha}\,\sqrt{-g}\,dt = 0\,, \tag{18}$$

where matter is "isolated".

The Eq.(18) holds for any moment t_f. Therefore

$$g_{\nu\,\alpha\,,\mu}\,T^{\nu\,\alpha} = 0\,. \tag{19}$$

Hereby the Synge argument (see above) makes metric independent from matter, leading to

$$g_{\nu\,\alpha\,,\mu} = 0\,. \tag{20}$$

Otherwise, energy and momentum are not locally conserved, and thus the strong equivalence principle would be violated. From Eq. (20) we derive $\Gamma^{\nu}_{\mu\alpha} = 0$. And vice versa, because $g_{\nu\,\alpha\,;\mu} = 0$. So, the inertial tetrad must satisfy Eq. (20), hereby the metric in tetrad coordinates is

$$g_{\hat{\mu}\,\hat{\beta}}(x^{\hat{\mu}}) = g_{\nu\alpha}(x^{\nu}(x^{\hat{\mu}}))\, A^{\nu}_{\hat{\mu}}\, A^{\alpha}_{\hat{\beta}}\,, \tag{21}$$

where the coordinate transformation matrix in limit $x^{\hat{\mu}} \to 0$

$$A^{\nu}_{\hat{\mu}}(x^{\hat{\mu}}) = e^{\nu}_{\hat{\mu}}\,. \tag{22}$$

In conclusion: a local inertial tetrad the energy-momentum conservation holds during all the proper times of this inertial system,

$$T^{\nu}_{\mu\,;\nu} = T^{\nu}_{\mu\,,\nu} = 0\,. \tag{23}$$

Therefore, by recalling the basic need to study problems in an inertial coordinate system (tetrad) [recall the demand for an inertial tetrad in the Galilean and Einstein Postulates of Relativity: in a non-inertial tetrad would be changed laws, but latter comes in conflict with [18]], we found no problem with the local conservation of the most basic laws of physics. But others have faced major problems (cf. e.g. Refs. [19, 26]).

IV. SOLUTION TO MILLENIUM PRIZE PROBLEM: THE INCONSISTENCY OF NAVIER-STOKES EQUATION

The Clay Institute has promised a million for solution to this problem. And, behold, we are giving it you! The answer to the problem of consistency is "No".

A. What is curvature of spacetime we shall work in?

You may simply say: we consider a perfect fluid in flat spacetime with Descartes coordinates (x, y, z). But it holds for the general case of curved spacetime, because of following argument. Consider the perfect fluid in an inertial tetrad. Then there holds $\Gamma^{\nu}_{\mu\alpha} = 0$ and, therefore, e.g. $g_{\nu\,\alpha\,;\mu} = g_{\nu\,\alpha\,,\mu} = 0$, with Eq. (23).

B. Calculation

The energy-momentum tensor of the perfect fluid [27, 28] reads

$$T^{\nu\mu} = (\rho + p)\, u^\nu\, u^\mu + p\, g^{\nu\mu} \tag{24}$$

with $u^\nu\, u_\nu = -1$. Then $T^{\nu\mu}_{\ ,\nu} = 0$ means

$$0 = u_\mu\, T^{\nu\mu}_{\ ,\nu} = \frac{d\rho}{d\tau} + (\rho + p)\,\Theta\,, \tag{25}$$

where $\Theta = u^\nu_{\ ,\nu}$ and

$$\frac{d\rho}{d\tau} = \frac{\partial\rho}{\partial x^\nu}\, u^\nu\,. \tag{26}$$

Let us calculate the density current [19, 27]

$$J^\mu = -T^{\nu\mu}\, u_\nu = \rho\, u^\mu\,. \tag{27}$$

Then

$$J^\mu_{\ ,\mu} = \frac{d\rho}{d\tau} + \rho\,\Theta\,, \tag{28}$$

and so from Eq. (25)

$$J^\mu_{\ ,\mu} = -p\,\Theta\,. \tag{29}$$

However, it is known that in flat spacetime the continuity equation for density current $J^\mu_{\ ,\mu} = 0$ holds [27–29]. Therefore, $p = 0$ which is a violation for the fluid: it is no longer a fluid but dust! One can derive the same result for a Navier-Stokes viscous fluid, but because the perfect fluid is the case of a Navier-Stokes fluid, the Navier-Stokes fluid is already proven to be inconsistent. In other words, this can be regarded as part of the solution to the more general problem of a fluid with viscosity, showing also $p = 0$ by another approach (see Appendix) [30].

C. Actual and Virtual Matter Joint Conservation or the Dawn of Self-consistent Q-Science

To make the fluid states self-consistent, one needs virtual matter which can be switched on and off ($K^{\nu\mu} = K^{\nu\mu}(t, x, y, z)$) This virtual matter influences the fluid (with energy-momentum tensor $\hat{T}^{\nu\mu}$) as

$$T^{\nu\mu} := \hat{T}^{\nu\mu} + K^{\nu\mu}\,, \qquad T^{\nu\mu}_{\ ;\nu} = 0\,. \tag{30}$$

In the context of Einstein equations one writes

$$G^{\nu\mu} = 8\pi\, T^{\nu\mu}\,. \tag{31}$$

In the course of Q-Science, Dark Matter is a particular case of virtual matter with $K^{\nu\mu}_{;\nu} = 0$. But generally one has $\hat{T}^{\nu\mu}_{;\nu} = -K^{\nu\mu}_{;\nu} \neq 0$.

Because the virtual matter is not directly detectable, the known energy conditions (null, weak, dominant, strong [36]) are written for $\hat{T}^{\nu\mu}$ only: this opens possibility to get wormholes and "warp-drives" for interstellar travel [1] without the actual "exotic matter".

V. CONSERVATION VERSUS REGULATION OF MATTER

As example we take the Reissner-Nordström spacetime (with mass M and electric charge $Q \neq 0$) with a radially falling neutral test body (electric charge $q = 0$). The minimally reached distance is not zero ($r > r_m \neq 0$), which is outside the curvature singularity at $r = 0$. Therefore, at the radius r_m we find a singularity which we call "personal singularity" with finite curvature (described by the Riemann Curvature Tensor).

One can expect that geodesics will not reach the infinite past (or infinite future, or the infinite space), or will be terminated in Big Bang singularity. The actual infinity, in any case, is not part of the physical Universe map (because it can not be measured even in principle [18]). So, they also can be terminated without an "actual" reasoning at a finite curvature.

Energy-momentum is conserved locally in General Relativity. However, the personal singularity is the breaking point: the body shrinks to zero, but a zero-sized body does not exist.

Because there are singularities in General Relativity, the latter can hardly be regarded (in current state of affairs [10]) as a predictable and conservative theory. Indeed, the vanishing of a body sometimes occurs at a finite curvature of spacetime. The velocity component is given by [27]

$$u^r \equiv \frac{d\,r}{d\tau} = -\frac{1}{r^2}\,\sqrt{B}\,, \tag{32}$$

where $B = E^2\, r^4 - (r^2 - 2\,M\,r + Q^2)\, r^2$.

In "geometrized" units (Q, M, r in meters) let us choose $Q = 1/5$ and $M = 1/2$. Zero

initial velocity ($B = 0$ at $r = r_0 = 20$) requires a trajectory with

$$E = \frac{\sqrt{9501}}{100}\,. \tag{33}$$

Therefore

$$B = -\frac{499}{10000}\,r^4 + r^3 - \frac{1}{25}\,r^2\,, \tag{34}$$

which is negative in $r < r_m = 20/499$. This means a termination of the falling body. The detailed study [2] shows that even photons are being terminated (in the Kerr-Newman spacetime; but various terminations are present also in a Kerr spacetime as well as in naked singularity regimes). Such obvious termination was never reported, cf. e.g. Refs. [13]. Why? Because it is not handled by Science. One needs Q-Science!

A. What happens to the test body?

A small dust cloud has [27]

$$\frac{d\rho}{d\tau} = -\rho\,\Theta\,, \tag{35}$$

where the covariant four-dimensional divergence is given by $\Theta = u^\nu_{;\nu}$. Therefore, in Reissner-Nordström spacetime one has

$$\Theta = \frac{3\,M\,r + 2\,r^2\,(E^2-1) - Q^2}{r^3\,u^r}\,. \tag{36}$$

To conclude, the volume of the dust cloud $V = m/\rho$ shrinks to zero as $u^r \to 0-$ at r_m. It is shown that the "geodesics deviation equation" agrees with this conclusion [2]. In our example above we have $\Theta = 0$ at $r \approx 15 < r_0 = 20$. This means that the model shows non-trivial behaviour even in the Newton approximation ($r \gg 2M = 1$).

The last point of the trajectory find the volume of the body to be precisely zero. Therefore, the body does not turn to a quantum particle but simply vanishes. Because the position r_m is given for any kind of a falling body, the resistance of the material does not save it any second longer. And the tidal forces are finite: there is no curvature singularity there [2]. The body simply disappears like by Q's decision: its size rapidly turns to zero (all the proper time derivatives of length are infinite at r_m). Such an event is clearly not managed by Science, but the Q-Science! We have found a density regulator: any high energies and densities are being deleted [11]. And if the latter is even possible, the character "Q from Star Track" would indeed be able to create and destroy things at own will [31], and even cause hallucinations and any kind of (self-)deception in people and dellusion [37].

VI. CONCLUSION

We have worked in any curvature of spacetime (even in flat one), and have shown the Dawn of the self-consistent Q-Science with virtual-actual matter division. [38]

Extremely dramatic spacetime effects are expected if a supernova produces a collapsing remnant which is going to be a black hole with a point-size matter bulb (within the short proper future of falling matter). Therefore, it is expected that any kind of falling body will feel the compression. That contradicts the established "fact", that the falling astronaut would be ripped into pieces. But how the latter is possible, if the final state of the cosmonaut is a singular point $r = 0$? Therefore, it is expected that the cosmonaut will be transformed into a large cloud of elemental particles, which stop their motion at $r_m \neq 0$. Therefore, there shall be a limit r_m. But we went into the right direction, proving that this cloud is a point-size "nothingness" with terminated trajectory at r_m. We have demonstrated here that even such a well-established fact like the ripping death of a falling astronaut is not the true enlightenment. [45] So, we have gained the following knowledge: we are sure about what we have demonstrated within General Relativity. And we should be safe to baseless criticism, until a disproof is found [41]. If you do not know a theorem, then you truly don't know the theorem. If you are sure that $2 = 1 + 1$, then you are truly sure. If you doubt that the Holographic Principle is true, then you truly doubt it [24]. So, there is always the Absolute Truth. There is no limit of getting knowledge. Let us call a human, who got to know all, a "Q". Think about the "Q" [39]. The "Q" knows also that he exists. So, the "Q" really exists, because even such a knowledge is out to get there.

VII. APPENDIX: THE NAVIER-STOKES PROBLEM

Let the viscous coefficients are time and space functions: $\eta = \eta(x^\nu)$, $\zeta = \zeta(x^\nu)$. If the fluid is electrically neutral, then the potential field acting on the fluid is zero, $\vec{U} = 0$. Nevertheless, the fluid can experience pushing from the sides of the fluid (the wings of an airplane are pushing air around the plane).

The norm of four-velocity is given $u^\nu u_\nu + 1 = 0$. By taking the covariant gradient, one gets

$$0 = (u^\nu u_\nu + 1)_{;\alpha}\, u^\alpha = a^\nu u_\nu + u^\nu a_\nu = 2\, a^\nu u_\nu \,, \tag{37}$$

where 4-acceleration $a^\nu = u^\nu_{;\alpha}\, u^\alpha$.

The four-current density is

$$J^\nu = -T^{\nu\mu}\, u_\mu = \rho\, u^\nu\,, \tag{38}$$

where the energy-momentum tensor $T^{\nu\mu}$ of the viscous fluid is taken from Ref. [27]. One obtains

$$J^\nu_{;\nu} = \frac{d\rho}{d\tau} + \rho\,\Theta\,, \tag{39}$$

where $\Theta = u^\nu_{;\nu}$ [40].

But on the other hand, because of $T^{\nu\mu}_{\;\;;\nu} = 0$ one has

$$(-T^{\nu\mu}\, u_\mu)_{;\nu} = -T^{\nu\mu}\, u_{\mu\,;\nu} = -\beta + \eta\, a^\nu a_\nu\,, \tag{40}$$

where

$$\beta = p\,\Theta + (2\eta/3 - \zeta)\,\Theta^2 - 2\,\eta\, u_{\nu\,;\mu}\, u^{(\nu\,;\mu)}\,, \tag{41}$$

and where $2\, u^{(\nu\,;\mu)} = u^{\nu\,;\mu} + u^{\mu\,;\nu}$.

Moreover, we have

$$u_\mu\, T^{\nu\mu}_{\;\;;\nu} = -\frac{d\rho}{d\tau} - \rho\,\Theta - \beta = 0\,. \tag{42}$$

In the derivations the following facts were used:

$$0 = (u^\beta u_{\beta\,;\alpha})^{;\alpha} = u^{\beta\,;\alpha} u_{\beta\,;\alpha} + u^\beta u^{\;;\alpha}_{\beta\,;\alpha}\,, \tag{43}$$

$$a^{;\alpha}_\alpha = (u^\beta u_{\alpha\,;\beta})^{;\alpha} = u^{\beta\,;\alpha} u_{\alpha\,;\beta} + u^\beta u^\alpha_{\;;\beta\,;\alpha}\,. \tag{44}$$

Therefore, from Eqs. (38)–(42) one obtains $a^\nu a_\nu = 0$. From Special Relativity it is known that $a^\nu a_\nu$ is zero only if the three-acceleration is zero: $\vec{a} = (0,0,0)$. The latter implies that the motion is force-free and the stream lines of the fluid are geodetics $a^\nu = 0$ at every point of spacetime. Therefore, without experiencing any acceleration the fluid is static and experiences no non-compensated pushing from the edges (no flying airplane then). In conclusion, the general (mathematically consistent) solution of the N-S equation is the pressure-free dust, $p = 0$.

VIII. CONFLICT OF INTEREST STATEMENT

"On behalf of all authors, the corresponding author states that there is no conflict of interest."

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[1] The wormholes in M.S. Morris, K.S. Thorne, "Wormholes in Spacetime and Their Use for Interstellar Travel: A Tool for Teaching General Relativity", Am. J. Phys. **56**, 395–412 (1988) and "warp-drives" are useable to change the course of history (recall the "grandfather paradox"), which is impossible: first pages of my paper. Thus, there is the $Q - agency$, which prevents this by any means necessary: S.W. Hawking, "Chronology protection conjecture", Phys. Rev. D **46**, 603 (1992), see also arXiv:gr-qc/0609054 and my contribution [2]. Understand now, that any travel between the universes (including ones in multi-world interpretation of Quantum Mechanics) must change the course of history (of universe the traveler enters). Thus, there are no parallel worlds detectable by our Instruments [18], except the influence of the "heavens", which are virtual parts (levels) of our Universe, illustrated in "Alphaville - Forever Young" https://youtu.be/t1TcDHrkQYg. Please note, that the Dr. Morris has announced wormholes singularity-free, but the process of wormhole making is the topology change [5], latter comes with curvature singularity (the actual infinity of curvature), which conflicts with [10, 11]. Moreover, the $v > c$ travel has pole of type $1/(v - v_0)$ in Lorentz transformation, thus that coordinates are special, which violates the Relativity Postulate.

[2] Dmitri Martila, My results in Science.

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[4] The un-scientific opposition to the latter is played in "Ace Ventura: When Nature Calls - Rhino Birth Scene" https://youtu.be/QFmFy0QyK5g

[5] Can't CERN open Star Gate to hell? The fear of Bible believers, is what CERN will open "inter-dimensional" wormhole to hell. "CERN admits they just opened a Portal" https://youtu.be/-HhZcNNoc60 The opening of portals is the common theme in the eso-

teric paranormal world. Star Gate movie: https://youtu.be/ZlVHkViRGVs But a theorem from last century kills that fantasy. Read: "This is roughly constitute the famous Geroch theorem, which states that in general relativity topology changes do not occur." A.A. Kirillov, E.P. Savelova, Wormhole as a possible accelerator of high-energy cosmic-ray particles, arXiv:1902.05742 [gr-qc] (Submitted on 15 Feb 2019).

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[9] C. Smorra, et al., Nature **550**, 371–374 (2017), with Dr. Michio Kaku comment in "The Universe Shouldn't Exist", in https://youtu.be/esPXpagkVwY

[10] Carlo Rovelli, "Quantum gravity". Scholarpedia. **3**(5), 7117 (2008) and Anthony Zee. Quantum Field Theory in a Nutshell (second ed.). Princeton University Press. pp. 172, 434, 435 (2010) with Dr. Michio Kaku comment in "Science vs. God: It's The Collapse Of Physics As We Know it", in http://www.dailymotion.com/video/x2jbd7x

[11] Because the actual infinity of a parameter scale can not exists, then exists only potential infinity of a measurable. Latter means, that there is absolute limit, e.g. speeds $v \leq c$, temperatures $T > 0$, time $t > t_{Big\,Bang}$, space $x \leq x_0$. However, the academic science is out the limits, e.g.: S. Braun, J.P. Ronzheimer, M. Schreiber, S.S. Hodgman, T. Rom, I. Bloch, U. Schneider, "Negative Absolute Temperature for Motional Degrees of Freedom", Science **339**, 52–55 (2013); Marcel Urban, F. Couchot, Xavier Sarazin, Arache Djannati-Atai, "The quantum vacuum as the origin of the speed of light", Eur. Phys. J. D **67**(3), 1 (2013); Y.Y. Kovalev, "RadioAstron Observations of the Quasar 3C273: a Challenge to the Brightness Temperature Limit", Astr. J. Lett. **820**(1), L9 (2016).

[12] "Invisible Man" type virtual matter (in a science fiction novel by H. G. Wells) can't be seen, but can be touched. The virtual matter in general can act, however staying untouchable: virtual hand can move the book only, but you can not catch this hand by your hand, as in a 1990 American romantic fantasy thriller film "Ghost" starring Patrick Swayze, Demi Moore, Whoopi Goldberg, Tony Goldwyn, and Rick Aviles. Dark Matter acts only on spacetime

curvature, but the "Ghost" would act only on our book, e.g.

[13] Eva Hackmann, Hongxiao Xu, "Charged particle motion in Kerr-Newmann space-times", Phys. Rev. D **87**, 124030 (2013); Tim Adamo, E.T. Newman, "The Kerr-Newman metric: A Review", Scholarpedia **9**, 31791 (2014), arXiv:1410.6626; H. Cebeci, N. Özdemir, S. Sentorun, "Motion of the charged test particles in Kerr-Newman-Taub-NUT spacetime and analytical solutions", Phys. Rev. D **93**, 104031 (2016).

[14] Eridanus Supervoid or Great Void in: Marcus Chown, New Scientist **196** (2631), 34–37 (2007).

[15] Human common reaction to a new thing is played in "Ace Ventura When Nature Calls: There's someone on the wing... some... thing" https://youtu.be/KY-ru62rBC4 There are indeed wonderful things to discover, because Philosophy of Religion must be united with Physics: knowledge of a human is the knowledge, that has his God. If human knows, that his God is omnipresent or omnipotent, then the human must also say, that his God is existent. It means, from dogma of omnipotence (also from omnipresence) comes dogma of Existence: if I do not exist, then I am not in potential to do anything.

The 2019 Wikipedia with references to peer-review sources tells us, that there must be a perfect description of faith, look: "In the context of religion, one can define faith as confidence or trust in a particular system of religious belief,[1] within which faith may equate to confidence based on some perceived degree of warrant,[2][3] in contrast to a definition of faith as being belief without evidence.[4]" I suggest, that the perfect description of faith is: Faith is the Faithfullness to Knowledge. I perfectly know, that my God is not satan, not Zeus, but Jesus Christ: John 8:54-55. In the Holy Book are many verses about the crucial importance of mind: "Love your God with all your mind and heart".

An omniscient thing must know own existence, so, in Science there is knowledge of existence of Him. It is easy to be omniscient and omnipotent, if you would be omnipresent. Thus, there is omniscient thing out there.

I tell opponent, what I have the proof. Opponent tells, that there is no proof. Thus, I tell him to stop playing God. Indeed, every word of God is true. But why my word is wrong, but opponent's is true?! Because opponent is playing God! He uses God-speech: Genesis 3:5 "and you will be like God, knowing".

God of Love, being omnipresent, unites married couple in perfect love: "in this world we just beginning to understand the miracle of living; maybe I was afraid before, but I am not afraid

anymore" (from Belinda Carlisle's song "Heaven is the place on Earth") https://youtu.be/P-WP6POdTgY

[16] "XENON1T probes deeper into Dark Matter WIMPs, with 1300 kg of cold Xe atoms", Istituto Nazionale di Fisica Nucleare, 28 May 2018, to be published in Phys. Rev. Lett; E. Aprile, et al., Phys. Rev. Lett. **119**, 181301 (2017); The Fermi-LAT Collaboration, Phys. Rev. Lett. **116**, 161101 (2016); C. Abel, et al., Phys. Rev. X **7**, 041034 (2017).

[17] Pieter van Dokkum, et al., "A galaxy lacking dark matter", Nature **555**, 629–632 (2018); Pieter van Dokkum, Shany Danieli, Roberto Abraham, Charlie Conroy, Aaron J. Romanowsky, "A second galaxy missing dark matter in the NGC1052 group", Accepted in ApJ Letters, arXiv:1901.05973 [astro-ph.GA]

[18] We like the following definition of Nature: it is what the Standard Instruments do measure, and Instruments are what measure the Nature. Because the micro world can be strongly influenced by measurements and the Instruments are part of the definition of the micro world, we must have Quantum Mechanics as the intimate relation between Nature and its Measurer. By deforming the metric $x \to q\,x$, $t \to q\,t$, $ds \to q\,ds$ and tuning according parameters (mass, charge, etc.) we would mentally reduce the size of Instruments, but their processes will not change, beautifully illustrated in "Men In Black [1997] Orion's Belt", in https://youtu.be/P7ojSW5pODk To measure correctly the Instruments must be seen as invariants of Metrology, the unchangeables: any places, times, and universes in multiverse which have alien laws or different fundamental constants are not physical. Because the Instruments in those places would be changed. Instruments of "alien beings from other planets" are different from ours, so, the aliens are not physical: from this comes the fear for the contact.

[19] L.D. Landau, E.M. Lifshitz. The Classical Theory of Fields: Course of Theoretical Physics. Vol. 2, Butterworth-Heinemann, 1975.

[20] As you might have noticed, the size of laboratory expands, but because the walls of laboratory are stationary in spacetime, there is no flow of Dark Energy through the walls (indeed the calculation gives $J^\nu = -T^{\mu\nu}\,u_\mu = (\Lambda, 0, 0, 0)$). Thus, there must be energy conservation in this inertial system. But there is none. This contradiction is solved by realizing that according to the Synge argument explained below, Dark Energy is not actual matter.

[21] I explain the fact that results of different measurements of the gravitational constant G fall in fundamentally non-intersecting error ranges [22] within the Q-Science not by the strongest

statistical and unknown systematic error, but by the (non-universal) influence of Dark Matter. As well as life possibility in most deep area of Ocean: Dark Matter can reduce the water pressure.

[22] T. Quinn, H. Parks, C. Speake, R. Davis, "Improved Determination of G Using Two Methods", Phys. Rev. Lett. **111**, 101102 (2013) Erratum: Phys. Rev. Lett. **113**, 039901 (2014); C. Speake, "Newton's constant and the twenty-first century laboratory", Phil. Trans. R. Soc. A. **363**, 2265–2287 (2005).

[23] Kai Tang, Michael H. Soffel, Jin-He Tao, Wen-Biao Han, Zheng-Hong Tang, "A long time span relativistic precession model of the Earth", Research in Astron. Astrophys. **15**(4), 583–596 (2015).

[24] Therefore, the critics of our paper cannot say: "your spacetimes are unphysical because you also work under event horizon, and there is a curvature singularity at $r = 0$", because the result is also found in spacetimes with a naked singularity, and the singularity can be removed by the "smooth correction" I am talking about. In addition, neither the holographic principle nor the Firewall nor the Hawking radiation stop us to get below the event horizon. "We present a simple model for stellar collapse and evaluate the quantum mechanical stress-energy tensor to argue that quantum effects do not play an important role for the collapse of astrophysical objects." [25].

[25] Bruno Arderucio-Costa, William Unruh, "Model for Quantum Effects in Stellar Collapse", Phys. Rev. D **97**, 024005 (2018).

[26] A. Einstein, "Hamiltonsches Prinzip und allgemeine Relativitätstheorie", Sitzungsberichte der preußischen Akademie der Wissenschaften (1916) 1111; C. Møller, "Further Remarks on the Localization of the Energy in the General Theory of Relativity", Ann. Physics **12**, 118–133 (1961); F.I. Mikhail, M.I. Wanas, A. Hindawi, E.I. Lashin, "Energy-Momentum Complex in Møller's Tetrad Theory of Gravitation", Int. J. Theor. Phys. **32**, 1627–1642 (1993).

[27] A.P. Lightman, W.H. Press, R.H. Price, S.A. Teukolsky. Problem Book in Relativity and Gravitation. Princeton University Press, 1975.

[28] L.D. Landau, E.M. Lifshitz. Fluid Mechanics: Course of Theoretical Physics. Vol. 6, Pergamon Press Verlag, 1966, 47–53; J.N. Reddy. An Introduction to Continuum Mechanics. Cambridge, 2008, 212–214.

[29] G.G. Stokes, "On the theories of internal friction of fluids in motion, and of the equilibrium

and motion of elastic solids", Trans. Cambridge Philos. Soc, Vol. 8, 1845.

[30] The case $\Theta = 0$ in Eq. (29) would mean that $\rho = \text{const}$ for any pressure p (cf. Eq. (28)). But it is not possible for $p \approx 0$, because then we have dust with varying density. Therefore, $\Theta \neq 0$ and, thus, our result $p = 0$. Moreover, absolutely rigid object is not allowed, because the speed of interactions is finite.

[31] Examples are: two separate detectors near a nuclear reactor in France found 3% of the antineutrinos missing [32]; not only purely gravitational anomalies exist, but the anomalies involving the material (i.e, strong and electro-weak) interactions [33]; the overheated solar corona mystery: the Parker Solar Probe will be the first spacecraft to fly into the low solar corona and determine what processes accelerate energetic particles; the solar neutrino problem: in 2002, Ray Davis and Masatoshi Koshiba found the number of solar neutrinos to be around a third of the number predicted by the standard solar model; these problems have not yet found a problem-less explanation (e.g., the neutrino oscilations are "outside" the course of Standard Model of Particles). Therefore, we propose Q-Science, which solves the crisis and dead end of Science: [34].

[32] G. Mention, et al., "The Reactor Antineutrino Anomaly", Phys. Rev. D **83**, 073006 (2011).

[33] The modern Physical Science records the unnatural brightness changes in the stars: T.S. Boyajian, et al., "Planet Hunters IX. KIC 8462852: Where's the flux?" Mon. Not. R. Astron. Soc. **457**(4), 3988–4004 (2016), S. Scaringi, et al., "The peculiar dipping events in the disk-bearing young-stellar object EPIC 204278916" Mon. Not. R. Astron. Soc. **463**(2), 2265–2272 (2016), look [35]. But also the historic Science has many records of unnatural Sun: unnatural (there was a full moon) blackout of the Sun during the crucifixion of Jesus Christ is the fact: Phlegon of Tralles, Sextus Julius Africanus, Thallus, Dionysius Areopagite, Bible. Why is such an obvious miracle buried in libraries and buried in doubt (cf., "Crucifixion darkness" in Wikipedia 2019)? Judging on horror of Christian persecutions, the hatred inside the satan (the idol of Absolute Evil) is exactly infinite. Thus, they lie, lie, lie, only to please the idol of lies. According to the Director of the Centre for Studies on New Religions (Cesnur), Massimo Introvigne, Christians are the most persecuted religious group in the world, with over 90,000 Christians killed in 2016 alone. All Earth people in 33AC are witnesses of this miracle. Thus, e.g., Areopagite does not need the literature sources: he can ask own memory or own blood relatives.

[34] L. Acedo, "Anomalous accelerations in spacecraft flybys of the Earth", L. Astrophys Space Sci **362**, 225 (2017), arXiv:1711.02875; L. Acedo, P. Piqueras, J.A. Moraño, "A possible flyby anomaly for Juno at Jupiter", Adv. Sp. Res. **61**(10), 2697–2706 (2018), arXiv:1711.08893, look [35]; proton radius puzzle: Axel Beyer, et al., "The Rydberg constant and proton size from atomic hydrogen", Science **358**(6359), 79–85 (2017); The second law of thermodynamics is considered one of the central laws of science, unresolved foundational issues concerning entropy and the second law are explored: Vladislav Capek, Daniel Sheehan. "Challenges to The Second Law of Thermodynamics: Theory and Experiment", Springer, Netherlands, 2005; temperature "10 times" anomaly: Y.Y. Kovalev, Astr. J. Lett. **820**(1), L9 (2016).

[35] The stars abnormal brightness or the satellites abnormal accelerations one can name "Bruce effect", played in "bruce almighty moon scene" https://youtu.be/00BPGH1AvRM

[36] Matt Visser, Carlos Barcelo, "Energy conditions and their cosmological implications", COSMO-99, 98–112 (2000), arXiv:gr-qc/0001099

[37] Anne Cross, "The Flexibility of Scientific Rhetoric: A Case Study of UFO Researchers", Qualitative Sociology. Springer. **27**(1), 3–34 (March 2004); Judy D. Wood, Eric Larsen,"Where Did the Towers Go?", The New Investigation, 2010, 540 pages; "California Wildfires: Directed Energy Weapons Theory" https://youtu.be/FAqj2mXNPKc ; D. Mcpherson, "Welcome to the wacky world of the Mandela Effect", The Telegraph, 20 September 2016.

[38] Beautiful illustration of the Q-Science potential is in "GHOST (1990) - Official Movie Trailer" https://youtu.be/vIy3MDzPyKg

[39] The "omniscience" of the Q is illustrated in "Lucy (2014) - Brain usage 100%" https://youtu.be/NdLTEC6X3pk

[40] If $J^{\nu}_{;\nu} = 0$ holds also, as holds $J^{\nu}_{,\nu} = 0$ above, then the relative density rate $((d\rho/d\tau)/\rho)$ is the four-divergence Θ; in this we recognize the physical meaning of divergence. Because in inertial tetrad the integral over $J^{\nu}_{,\nu}$ has physical meaning in Gauss Theorem, then the $J^{\nu}_{,\nu} = 0$ is scalar. Thus, holds $J^{\nu}_{;\nu} = 0$.

[41] The Q-Methodology is following. The Popper's criterion "any scientific theory is disprovable" is replaced in Q-Science with the vector of progress: "any scientific theory is provable". The Burden of proof in Q-Methodology sounds "please support own statements" and does not mean the Presumption of Guilt, but still holds the Presumption of Innocence: "nobody is wrong (nor sick, nor criminal, nor delusional) until disproof would come". But nowadays such lovable prin-

ciples are being laughed at. Why? Because the overall vector of degeneration was not realized when there was less of degeneration, then without the Q-Support it will never be realized. So, the overall degradation can only grow (just like the Entropy) with time. But Q-Methodology makes us happy: "Little Big Town - Happy People" https://youtu.be/DDcJiamY9N8

[42] But it acts on actual matter: "Free Energy Machine" https://youtu.be/m8-Kek8Halc "How to Make a Free Energy Machine at Home" https://youtu.be/KywwfuoXP7s Don't be scared by their titles, because if there were an alternative Science, then there is an alternative Truth, including of the equality of $2 + 2$ is 4. This is impossible.

[43] Here and in the following the index with semicolon means the covariant derivation using Christoffel symbols, while the index with comma means ordinary derivative with respect to the spacetime coordinate x^{ν}.

[44] Tasha death by dark fluid, driven by living virtual matter: "Star Trek, Skin of Evil" https://youtu.be/a9G3g8OSPBw

[45] Latter is played in "Ace Ventura: When Nature Calls. In the monastery" https://youtu.be/SYl8cL83Z24