

Dialectical View of Nature in Physical Time-Space — Consummating Special Relativity

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Abstract: (1) The incapability of SR to originate AY in IRPCE reveals: It must objectively exist in the universe that the Unique Absolute Reference System (ARS), of ARS the time-space is isotropic and steady-homogeneous, *relative to ARS all the Lorentz effect of whole universe are IRPCE*, for ARS the simultaneity is absolute unified sole of whole universe; and by which AY in IRPCE is originated. (2) Deprive *entirely none of the-(1)* but respectively for every motional inertial system (*i.e.* except alone for ARS) displace the nominal value field of initial moments only, SR would necessarily & sufficiently be mathematic-logically reached from the-(1) and the TP may essentially be solved by the-(1). (3) The coexistence of the-(1) & the-(2) shows that there is a possible physical time-space structure theory standing alone in no-paradox, of which the-(1) is the intrinsic origin & determining connotation and SR is the right description of external-form only. (4) *It is impossible determined by the-(1) itself that to quantitatively find-admeasure the-(1) immediately by kinematics experiments.* Which endows innately with the forced inevitability, and the feasibility is ensured congenitally by that the physical time-space metric & simultaneity is mutually independent each other, the opposite-unity of the-(1) & SR has from possibility as the-(3) became to an inborn inexorable law.

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1. Introduction

The incapability of SR to originate AY in IRPCE has been revealed in the article entitled ‘Special Theory of Relativity is Right Only in External-form but Intrinsic-origin Deleted Innately a Basically Imperfect Theory’, which reached following the-(1):

(1) It must objectively exist in the universe that the Unique Absolute Reference System (ARS), of ARS the time-space is isotropic and steady-homogeneous, *relative to ARS all the Lorentz effect of whole universe are IRPCE*, for ARS the simultaneity is absolute unified sole of whole universe; and by such an Absolute Unique Lorentz-Fitzgerald Contraction AY in IRPCE is originated.

Here we show:

(2) Deprive *entirely none of the-(1)* but respectively for every motional inertial system (*i.e.* except alone for ARS) displace the nominal value field of initial moments only, SR would necessarily & sufficiently be mathematic-logically reached from the-(1) and the TP may essentially be solved by the-(1).

(3) The coexistence of the-(1) & the-(2) shows that there is a possible physical time-space structure theory standing alone in no-paradox, of which the-(1) is the intrinsic origin & determining connotation and SR the right description of external-form only.

(4) *It is impossible determined by the-(1) itself that to quantitatively find-admeasure the-(1) immediately by kinematics experiments.* Which endows innately with the forced inevitability, and the feasibility is ensured congenitally by that the physical time-space metric & simultaneity is mutually independent each other, the opposite-unity of the-(1) & SR has from possibility as the-(3) became to an inborn inexorable law. [1-10].

2. Intrinsic origin & determining connotation of physical time-space structure

2.1. Elementary sentence: It must objectively exist in the universe that the ARS Σ_0 , of Σ_0 the time-space is isotropic and steady-homogeneous, relative to Σ_0 the Lorentz effect of whole universe is all IRPCE (Ab.1).

Not lose general, is Σ_v an inertial frame with both the absolute (relative to Σ_0) velocity V and axis X^* being identical to the axis X of Σ_0 in the direction, then would gets:

$$\Delta T_A^* = \Delta T \sqrt{1 - v^2/c^2}, \Delta X_A^* = \Delta X / \sqrt{1 - v^2/c^2}, \Delta Y_A^* = \Delta Y, \Delta Z_A^* = \Delta Z.$$

and $\Delta T \equiv \Delta T_A, \Delta X \equiv \Delta X_A, \Delta Y \equiv \Delta Y_A, \Delta Z \equiv \Delta Z_A \dots\dots(1)$

In Eq.(1), the subscript ‘A’ means the ‘absolute intrinsic physical reality’.

2.2. Theorem 1: The existence of Σ_0 is unique (Ab.2).

If there are two Absolute Static Inertial Frames Σ_{01} and Σ_{02} , the value of the velocity relative each other is u.

According to Eq.(1), gets: $\Delta T_{2A} = \Delta T_{1A} \sqrt{1 - u^2/c^2}$ and $\Delta T_{1A} = \Delta T_{2A} \sqrt{1 - u^2/c^2}$, $\Rightarrow \Delta T_{2A} = \Delta T_{2A} (1 - u^2/c^2) \Rightarrow u=0$. It shows Σ_{01} and Σ_{02} is the same frame. Theorem 1 is testified.

2.3 Definition 1: It is the absolute unified simultaneity of whole universe that set up by light velocity constant alone in Σ_0 (Ab.3).

2.4 Theorem 2: All forward-return cycle constant are the light speeds in vacuum for every inertial frame (Ab.4).

Fig.1: When the overlapped zero clock of Σ_0 and of Σ_v both begin the timing, if there is a pulse of light being radiated from zero with the angle included between its direction and the axis X of Σ_0 is α , which at the moment T is reflected and finally gets to the zero of Σ_v .

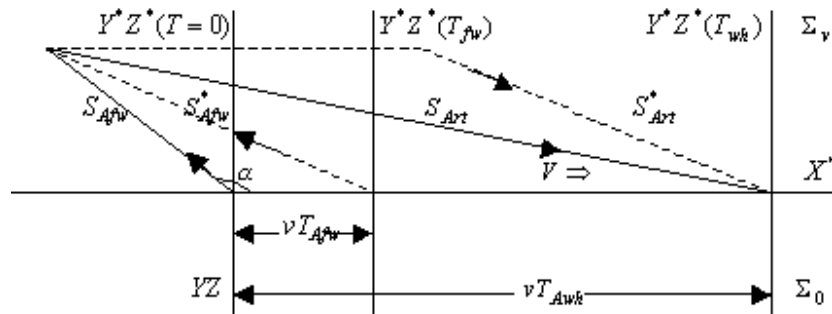


Fig.1. Absolute light speed: Forward-return cycle constant but aeolotropism. It is essentially different than the light speed constant and justly genuine connotation of ZME, origin of & criterion for modern time-space view.

For Σ_0 : Acc. Ab.3, get:

(1) The optical distance in forward phase is: $S_{Afw} = cT$.

(2) The optical length and time in return phase can be calculated as follows:

$$(cT)^2 + [v(T + T_{Art})]^2 - 2(cT)[v(T + T_{Art})]\cos\alpha = (cT_{Art})^2 \text{ (Cosine law)}$$

$$\Rightarrow T_{Art} = \frac{1 - 2(v/c)\cos\alpha + v^2/c^2}{1 - v^2/c^2} T, S_{Art} = \frac{1 - 2(v/c)\cos\alpha + v^2/c^2}{1 - v^2/c^2} cT.$$

(3) The time in the whole process:

$$T_{Awh} = T + T_{Art} = \frac{2[1 - (v/c)\cos\alpha]}{1 - v^2/c^2} T.$$

With regard to Σ_v : Acc. Ab.1, obtains:

(1) The time and optical length in forward phase:

$$T_{Afw}^* = T \sqrt{1 - v^2/c^2} \dots\dots (2)$$

$$S_{Afw}^* = \left[(S_{Afw} \sin \alpha)^2 + \left(\frac{S_{Afw} \cos \alpha - vT}{\sqrt{1 - v^2/c^2}} \right)^2 \right]^{1/2} = \frac{1 - (v/c) \cos \alpha}{\sqrt{1 - v^2/c^2}} cT \dots\dots (3)$$

(2) The time and optical length in return phase:

$$T_{Art}^* = T_{Art} \sqrt{1 - v^2/c^2} = \frac{1 - 2(v/c) \cos \alpha + v^2/c^2}{\sqrt{1 - v^2/c^2}} T \dots\dots (4)$$

$$S_{Art}^* = \left[(S_{Afw} \sin \alpha)^2 + \left(\frac{S_{Afw} \cos \alpha + vT_{Art} - vT_{Awh}}{\sqrt{1 - v^2/c^2}} \right)^2 \right]^{1/2} = \frac{1 - (v/c) \cos \alpha}{\sqrt{1 - v^2/c^2}} cT \dots\dots (5)$$

(3) The optical length and time in whole process:

$$T_{Awh}^* = T_{Afw}^* + T_{Art}^* = \frac{2[1 - (v/c) \cos \alpha]}{\sqrt{1 - v^2/c^2}} T$$

$$S_{Awh}^* = S_{Afw}^* + S_{Art}^* = \frac{2[1 - (v/c) \cos \alpha]}{\sqrt{1 - v^2/c^2}} cT$$

Therefore, the light velocity relative to Σ_v for whole process is:

$$c_{Awh}^* = S_{Awh}^* / T_{Awh}^* = c$$

Theorem 2 has been verified.

2.5 Theorem 3: All aeolotropic are the light velocities in vacuum for every inertial frame except alone for Σ_0 (Ab.5).

Acc. Eq.(2),(3),(4)&(5), get: The light one-path velocity for Σ_v is follows:

$$\text{In the forward phase: } c_{Afw}^* = S_{Afw}^* / T_{Afw}^* = \frac{1 - (v/c) \cos \alpha}{1 - v^2/c^2} c.$$

$$\text{In the return phase: } c_{Art}^* = S_{Art}^* / T_{Art}^* = \frac{1 - (v/c) \cos \alpha}{1 - 2(v/c) \cos \alpha + v^2/c^2} c.$$

They are all the function of the directional angle α but not the constant speed c .

Comparing Ab.4 with Ab.5 shows that the light speed forward-return cycle constant is essentially different to the light speed constant. So it must be emphasized that only the light speed forward-return cycle constant is justly the genuine connotation of the zero-result of the Michelson-Morley experiment, and because of which revolting against Galileo conversion brings about that the time-space coordinate transformation is necessary to renew, so which is the origin of and criterion for modern time-space view.

2.6 Sentence 2: *It is impossible decided naturally by Ab.1 and Ab.4 themselves that Ab.1 may quantitatively be find-admeasured immediately by kinematics experiments* (Ab.6).

The kinematics experiments for find-admeasuring quantitatively Ab.1 can be classified into only the two kinds by whether depending on that the simultaneity must previously be set up.

The first such as the Michelson-Morley experiment attempts to reckon the absolute velocity V of the observational frame by admeasuring the aeolotropism of the light forward-return cycle speeds so as independent from the simultaneity. But they would be ended in smoke for the zero-result congenitally caused by Ab.4.

Second is immediately to measure the aeolotropism of the one-path light speed or any IRPCE. But to measure the one-path light speed or any IRPCE must previously realize the calibration of moments of all allopatric clocks in the

observational frame so as to establish the simultaneity; and it is absolute disqualification determined innately by Ab.1 for taking the responsibility of carrier or method in above calibration that all motional objects of whole universe except alone for the light signal; but to calibrate the moments of the allopatric clocks by the light signal must beforehand know the one-path light speed so acc Ab.5 must base upon the precognition of Ab.1. ... Such an innate logic circulation should fate them in being unable to carry out.

Uncounted painstaking efforts seeking for ether had gotten nothing in last over hundred years, justly caused by Ab.6.

This is one of theoretical cruxes of physical time-space view because of justly caused by which physical time-space theory has congenitally been separated into its intrinsic essence Ab.1 with its external form SR such two aspects, and such two aspects must naturally been treated as a opposite-united ensemble. None of all physicists including Lorentz and Einstein themselves understands this opposite-unity, so Ab.1 and SR had certainly been mistaken to be mutually denying each other, caused the hypothesis of the existence of Lorentz-Filtzgerald contraction had historically been negated, which made that Lorentz die with everlasting regret.

Therefore, it must originally be revealed that physics is though an experimental science, for which but do not mistake what all the physical existence may unconditionally be quantitatively find-admeasured immediately by experiments. Ab.1 is justly a fundamental example showed as Ab.6.

There are three lemmas resulted directly from Ab.6.

2.7 Lemma 1: Finding Ab.3 and Ab.5 immediately by kinematics experiments are also impossible (Ab.7).

3. Existential form of physical time-space

3.1. Lemma 2: In experimental physics, it is uniquely rational hypotheses that the light speed in vacuum is constant and the principle of special relativity is universal relevant (Ex.1).

To find the optimal frame having the fraction in lowest terms for the Maxwell equation is the aim of seeking for ether being naturally Σ_0 . It has been fated by Ab.6 though Σ_0 existing objectively, so which is seemingly an innate defect and priori incompetence of physics, but actually just the reverse, which is a protogene of and the greatest gospel for the experimental physics. Rightly caused by it, physical time-space essential gene Ab.1 changes naturally into its external form, the hypothesis about Maxwell equation has its same lowest form in all inertial frames but not only in Σ_0 for the experimental physics, and which is generally not only permissible (consistent with Ab.4) but also uniquely inevitable (having no other choice) to hypothesize that the principle of light speed constant and principle of special relativity are both universally usable so as to cause what SR was originated and the great leap is achieved in the experimental physics for all field both the theory and practice.

3.2. Lemma 3: The simultaneity set up by the principle of light speed constant in all inertial frames but not only in Σ_0 is the mutually different simultaneity of relativity of every inertial frame-self for the experimental physics (Ex.2).

$$\begin{array}{cccc}
 T_1 / \sqrt{1 - v^2/c^2} & T_1 \sqrt{1 - v^2/c^2} & T_1 \frac{\sqrt{1 - v/c}}{\sqrt{1 + v/c}} & T^* = T_A^* - \frac{v}{c^2} X^* \\
 T_1 \sqrt{1 - v^2/c^2} & T_1 \sqrt{1 - v^2/c^2} & T_1 \sqrt{1 - v^2/c^2} & T_A^* \\
 -vT_1 / \sqrt{1 - v^2/c^2} & 0 & (c - v)T_1 / \sqrt{1 - v^2/c^2} & X^* = X_A^*
 \end{array}$$

D^*	Q^*	A^*	$\Sigma_v \quad V \Rightarrow$
O	A	B	Σ_0
0	vT_1	cT_1	X
T_1	T_1	T_1	$T = T_1$

Fig. 2. Condition of transform between Ab.1 & Ex.1: Depriving none of Ab.1 but displacing the nominal value field of initial moments of Σ_v only.

4. Opposite-unity of Ab.1-5 and Ex.1-2

4.1. Key sentence-1: It is *changing no the absolute intrinsic real metric of whole universe determined by Ab.1* but displacing the nominal value field of initial moments of Σ_v that the necessary and sufficient condition for the opposite-unity and mutual transform of Ab.1-5 with Ex.1-2. (Ou.1):

$$T^*(X^*) = T_A^*(X^*) - \frac{v}{c^2} X^*, X^* = X_A^*, Y^* = Y_A^*, Z^* = Z_A^*; \dots\dots (6)$$

In Eq.(6), the quantity with no subscript is those of relativity of mutual observation.

Jointing Eq.(1) and Eq.(6), get:

$$T^* = T_A^*(X^*) - \frac{v}{c^2} X^* = T \sqrt{1 - v^2/c^2} - \frac{v}{c^2} \frac{X - vT}{\sqrt{1 - v^2/c^2}} = \frac{T - \frac{v}{c^2} X}{\sqrt{1 - v^2/c^2}},$$

$$X^* = X_A^* = \frac{X - vT}{\sqrt{1 - v^2/c^2}}, Y^* = Y, Z^* = Z. \dots\dots\dots (7)$$

Eq.(7) is justly the Lorentz transformation, *the flawless expression and perfect embodiment of SR* being the physical theory of that *the necessary and sufficient fundamental characteristic is the time-space coordinate conversion between any two inertial frames must adhere to Lorentz transformation*, which shows Ab.1-5 has really been transferred into its extrinsic existent form Ex.1-2. And such a changing uniquely caused by Eq.(6) is only that the initial moment field of Σ_v from absolute constant value field is displaced into relativity variable quantity field provided with gradient of constant vector of $-V/c^2$ shown as Fig.2, so caused by which none of the absolute intrinsic real metric of whole universe determined by Ab.1 is changed.

From such beyond all expectations a result, a crux-secrecy has been revealed: Ab.1 determines all the inertial time-space metric of whole universe, the ‘Fixed Clock Velocity’ with the ‘Rule Length in the Space of Every Inertial Frame Own Intrinsic-Real Simultaneity, the Absolute Unified Simultaneity of Whole Universe defined by the Ab.3’; and it is thoroughly depriving none of the Ab1 that displacing the initial constant moment field of Σ_v with Eq.(6) so as transforming the Absolute Unified Simultaneity into the relative simultaneity of Σ_v and the ‘light speed forward-return cycle constant’ into the ‘light speed constant’; which shows that *the two aspects of time-space characteristic, the time-space metric and simultaneity, is mutually independent*. This is very important a key concept because of that if no clearing it, to really understand SR, its deficiency and perfecting would all absolutely be impossible.

This result shows:

4.2. Key sentence 2: The relevant relationship of the time-space coordinate between relativity and absoluteness of any fixed world point in every inertial frame is all follows (Ou.2):

$$T_A^* \equiv T^* + \frac{v_A}{c^2} X^*; X_A^* \equiv X^*, Y_A^* \equiv Y^*, Z_A^* \equiv Z^*.$$

$$(T_A^*(R^*) \equiv T^*(R^*) + v_A \bullet R^*/c^2; R_A^* \equiv R^*) \dots\dots (8)$$

4.3. Lemma 4: For the experimental physics, the Lorentz transformation is uniquely the rational correlation equation for the time-space coordinate between different inertial frames (Ou.3).

4.4. Key sentence 3: AY is Ab.1 (Ou.4).

Fig.3: At the moment of the overlapped zero clocks of Σ_0 and Σ_v both begin the timings, is there a spacecraft (SC.) from the zero start off. The angle included between the directions of its constant velocity U relative to Σ_v and

the axis X^* of Σ_v is θ . Straight moves and at the moment T^* of Σ_v , it instantly return-back, with constant speed $-U$ finally gets to the zero of Σ_v .

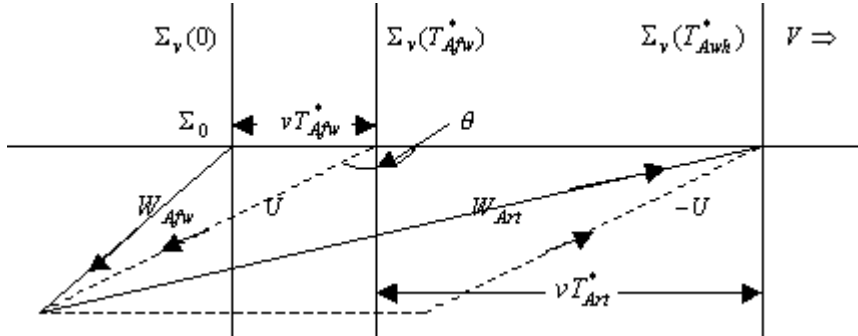


Fig. 3. AY is Ab.1: Just uniquely caused by Ab.1, any object with constant velocity u relative to any a inertial frame finished a forward-return cycle motion, its elapsed time in whole travel should unconditionally be $\sqrt{1-u^2/c^2}$ times to those of the inertial frame.

For Σ_v : Acc. Eq.(8), get:

(1) The absolute time in forward phase is:

$$\Delta T_{Afw}^* = \Delta T_{fw}^* (\Delta X_{fw}^*) + \frac{v}{c^2} \Delta X_{fw}^* = T^* + \frac{v}{c^2} u T^* \cos \theta = T^* (1 + uv \cos \theta / c^2)$$

(2) The absolute time in return-back phase is:

$$\Delta T_{Art}^* = \Delta T_{rt}^* (\Delta X_{rt}^*) + \frac{v}{c^2} \Delta X_{rt}^* = T^* + \frac{v}{c^2} (-u T^* \cos \theta) = T^* (1 - uv \cos \theta / c^2)$$

(3) The absolute time in whole travel is:

$$\Delta T_{Awh}^* = \Delta T_{Afw}^* + \Delta T_{Art}^* = 2T^*$$

As for Σ_0 , acc. Ab.1, the corresponding times are:

$$\Delta T_{fw} = \Delta T_{Afw}^* / \sqrt{1-v^2/c^2} = T^* (1 + uv \cos \theta / c^2) / \sqrt{1-v^2/c^2}$$

$$\Delta T_{rt} = \Delta T_{Art}^* / \sqrt{1-v^2/c^2} = T^* (1 - uv \cos \theta / c^2) / \sqrt{1-v^2/c^2}$$

With regard SC., acc. Ab.1&Eq.(7)(8), get:

(1) The absolute velocities:

$$w_{Afw}^{**} = \Delta S_{Afe}^{**} / \Delta T_{fw} = \left[\left(\frac{X_{fw}^* + v T_{fw}^*}{\sqrt{1-v^2/c^2}} \right)^2 + Y_{fw}^{*2} \right]^{1/2} / \Delta T_{fw}$$

$$= \left[\left(\frac{uT^* \cos \theta + vT^*}{\sqrt{1-v^2/c^2}} \right)^2 + (uT^* \sin \theta)^2 \right]^{1/2} / \Delta T_{fw} = \frac{(u^2 + v^2 + 2uv \cos \theta - u^2 v^2 \sin^2 \theta)^{1/2}}{1 + uv \cos \theta / c^2}$$

$$w_{Art}^{**} = \Delta S_{Art}^{**} / \Delta T_{rt} = \left[\left(\frac{X_{wh}^* + vT_{wh}^*}{\sqrt{1-v^2/c^2}} - \frac{X_{fw}^* + vT_{fw}^*}{\sqrt{1-v^2/c^2}} \right)^2 + (Y_{hw}^* - Y_{fw}^*)^2 \right]^{1/2} / \Delta T_{rt}$$

$$= \left[\left(\frac{0 + v2T^*}{\sqrt{1-v^2/c^2}} - \frac{uT^* \cos \theta + vT^*}{\sqrt{1-v^2/c^2}} \right)^2 + (0 - uT^* \sin \theta)^2 \right]^{1/2} / \Delta T_{rt}$$

$$= \frac{(u^2 + v^2 - 2uv \cos \theta - u^2 v^2 \sin^2 \theta)^{1/2}}{1 - uv \cos \theta / c^2}$$

(2) The absolute times:

$$\Delta T_{Afw}^{**} = \Delta T_{fw} \sqrt{1 - w_{Afw}^2 / c^2} = T^* \sqrt{1 - u^2 / c^2}$$

$$\Delta T_{Art}^{**} = \Delta T_{rt} \sqrt{1 - w_{Art}^2 / c^2} = T^* \sqrt{1 - u^2 / c^2}$$

$$\Delta T_{Awh}^{**} = \Delta T_{Afw}^{**} + \Delta T_{Art}^{**} = 2T^* \sqrt{1 - u^2 / c^2}$$

So get: $\Delta T_{Awh}^{**} / \Delta T_{Awh}^* = \sqrt{1 - u^2 / c^2} < 1$

Above calculating reveals: Just caused uniquely by Ab.1, any object with constant velocity u relative to any inertial frame finished a forward-return cycle motion, its elapsed time in whole travel should unconditionally be $\sqrt{1 - u^2 / c^2}$ times to those of the inertial frame.

And:

$$\Delta T_{Afw}^{**} / \Delta T_{Afw}^* = \frac{(1 - u^2 / c^2)^{1/2}}{1 + uv \cos \theta / c^2} \neq \sqrt{1 - u^2 / c^2} \dots\dots(9)$$

$$\Delta T_{Art}^{**} / \Delta T_{Art}^* = \frac{(1 - u^2 / c^2)^{1/2}}{1 - uv \cos \theta / c^2} \neq \sqrt{1 - u^2 / c^2} \dots\dots(10)$$

No matter in forward phase or in return-back phase, the results are generally all not $\sqrt{1 - u^2 / c^2}$, shows:

4.5. Lemma 5: Generally is RERMO but not IRPCE the Lorentz effect can infinitely deviate from IRPCE except for those relative to Σ_0 (Ou.5).

4.6. Lemma 6: It is only in one of the two inertial phases at the experiment for AY that the physical clocks intrinsic-real velocity of SC. is surely no-exceed $\sqrt{1 - u^2 / c^2}$ times to those of Σ_v . As for another, the result can logically be the opposite. (Ou.6).

When $v/c \ll 1$, Eq.(9) and Eq.(10) both change into:

$$\Delta T_{Afw}^{**} / \Delta T_{Afw}^* \approx \Delta T_{Art}^{**} / \Delta T_{Art}^* \approx \sqrt{1 - u^2 / c^2} \dots\dots(11)$$

Eq.(11) shows the so-called ‘Longevity of High-energy Meson’, an outcome in *IRPCE resulted from the(1)* but mistaken by almost all SR’s scholars for an identification of SR, which exactly is a negation but not evidence for SR’s relativity-only time-space view, and also shows that the speed of Earth (these experiment observations take place on) relative to Σ_0 is objectively much smaller than the c.

4.7. Lemma 7: *The Longevity of High-energy Meson is a verification of the-(1) so a negation but not evidence for SR's relativity-only time-space view (Ou.7).*

$$\Delta T_{Afw}^{**} / \Delta T_{Afw}^* = \frac{(1-u^2/c^2)^{1/2}}{1+uv \cos \theta / c^2} \stackrel{u=v}{\underset{\cos \theta = -1}{=}} \frac{1}{\sqrt{1-u^2/c^2}}$$

$$\Delta T_{Art}^{**} / \Delta T_{Art}^* = \frac{(1-u^2/c^2)^{1/2}}{1-uv \cos \theta / c^2} \stackrel{u=v}{\underset{\cos \theta = 1}{=}} \frac{1}{\sqrt{1-u^2/c^2}}$$

Their meaning is that in such a conditional phase SC. would be not youth-ate caused by astronavigation but oppositely old-ate, for which but AY of whole travel cannot be changed.

4.8. Key sentence-4: The inertial frames between which the conversion of time-space coordinate has to follow the Lorentz transformation generally are mutually being symmetric-equivalent for the external form only in RERMO but oppositely for the intrinsic-real time-space metric in IRPCE being both asymmetric and non-equivalent (Ou.8). Please note the role for AY played by the motion of the instantly return-back phase.

In above former case, it causes the ratio of the clock absolute intrinsic-real velocities between of SC. and of Σ_v changing from $(1-u^2/c^2)^{-1/2} > 1$ into $(1-u^2/c^2)^{1/2} (1+u^2/c^2)^{-1} < 1$ which bring about SC. from 'astronautic old-ate' state into 'astronautic youth-ate' phase so as resulted in AY of the whole travel. Is it the evidence proving that AY is the 'non-inertial effect'? No. This is a typical problem of the conception misplaced. Expounding immediately it requires a lot of arguing. But comparing it with the effect of starting for the win of Marathon Champion, then it is easy to understand: If has no the starting would have no subsequent high-speed then should have no the win of Marathon Champion; but the win of Marathon Champion in the final analysis is mainly high-speed accumulated effect but not starting effect.

As for the last case, the effect of the instantly return-back phase motion is justly reversed: Caused by it, the ratio of clock absolute intrinsic-real velocities between of SC. and of Σ_v changing from $(1-u^2/c^2)^{1/2} (1+u^2/c^2)^{-1} < 1$ into $(1-u^2/c^2)^{-1/2} > 1$ which bring about SC. from 'astronautic youth-ate' phase into 'astronautic old-ate' state. But it also cannot change AY of the whole traveling, which from another aspect once more shows that AY cannot be the 'non-inertial effect'.

4.9. Lemma 7: AY cannot be the 'non-inertial effect' (Ou.9).

5. Structure of naturally dialectic time-space view

It is the origin of and criterion for the modern time-space view that the zero-result of Michelson-Morley experiment aiming to find the optimal frame having the fraction in lowest terms for the Maxwell equation, which stores entirely the dialectic information about the physical time-space, on which basis it is expounded and proved that following conclusions implicated in the dialectical unity of the history, logic, practice and philosophy in probing time-space mystery, of which to rightly understand the physical essence of SR's mirage is the first important crux.

Originally, the zero-result shows that all forward-return cycle constant are the light speeds for every inertial frame. Rightly such antagonizing the Galileo conversion an objective existence results in that to renew time-space coordinate transformation is necessary and that not only permissible but also uniquely inevitable for the experimental physics is to hypothesize the Maxwell equation has same lowest form in all inertial frames but not only in the special one, and which exact meaning is generally the permission to and inevitability in hypothesizing that being both universally usable of the principle of light speed constant and principle of special relativity is the uniquely exact extrinsic law for experimental physics, so as causes the Lorentz transformation and SR coming out.

Unfortunately, *It Is Mistaken By SR For The Generally Ensemble-Overall Physical Existence that Being Mutual Symmetry-Equivalent of All Inertial Frames Determined By The Unity Of Such Two Principles Are Only In The External Form*, which caused that the Key Gene of SR is being All Identical each other in Intrinsic-real Velocity of Any Fixed Clocks Between Any Different Inertial Frames [1-7] and decided that the essence of TP, AY, only can be the 'non-inertial effect'. It is testified being only RERMO but not IRPCE that the 'non-inertial effect', above SR's mirage, although has testified the 'non-antinomy of TP' and 'self-consistence of SR' in RERMO but originating no AY in IRPCE. Such an AY has been revealed only can be mainly a fruitage of the process accumulation of the difference in Intrinsic-real velocity of fixed clocks between the traveler and earth in the two inertial phases, which

uniquely caused by the Lorentz effect decided only by the difference of motion velocity of inertial state but none of all else motional quantities such as accelerations or displacements, based on which the 'Absolute Doctrine', following 'Conclusion (1)-(5)', is reached. But on the other hand, it treated as the another focal crux has also been expounded and verified in the 'Three Supporting Materials-3' that *decided innately by IRPCE-self, to quantitatively find-admeasure the IRPCE immediately by kinematics experiments is impossible*, according to which the 'Unificationary Doctrine', following 'Conclusion (5)-(10)', is gotten. Thusly, the Key Gene of SR is denied and following dialectical secret of nature of physical time-space is revealed by *the congenial intrinsic dialectical unity of these two cruxes [8-10]*:

The time-space is the opposite-unity of the absolute aspect and relative aspect. The absolute aspect is the intrinsic essence includes:

- (1) Ab.1&2: It must uniquely objectively exist in the universe that the Absolute Static Inertial Frame Σ_0 , of which the time-space is isotropic and steady-homogeneous, relative to which the Lorentz effect of whole universe is all IRPCE.
- (2) Ab.3: It is the absolute unified simultaneity of whole universe that set up by light velocity constant only for Σ_0 .
- (3) Ab.4: All forward-return cycle constant are the light speeds in vacuum for every inertial frame.
- (4) Ab.5: All aeotropic are the light velocities in vacuum for every inertial frame except for Σ_0 .
- (5) Ab.6&7: *It is impossible decided naturally by Ab.1 and Ab.4 themselves that Ab.1,3&5 may be quantitatively find-admeasured immediately by kinematics experiments.*

The relative aspect is the external form described exactly by SR:

- (6) Ex.1: In the experimental physics, it is the uniquely rational hypotheses that the light speed in vacuum is constant and that the principle of special relativity is universally relevant.
- (7) Ex.2: The simultaneity set up by the principle of light speed constant in all inertial frames but not only in Σ_0 is the mutually different simultaneity of relativity of every inertial frame own in the experimental physics.

The absolute aspect of the contradiction is the principal aspect and decisive factor. It changes into the external form only caused by its own intrinsic nature of Ab.1 & Ab.4, which absolutely changes no itself essential kernel Ab.1:

- (8) Ou.1: It is *changing no the absolute intrinsic real metric of whole universe determined by Ab.1* but displacing the nominal value field of initial moments of Σ_v that the necessary and sufficient condition for the opposite-unity and mutual transform of Ab.1-5 with Ex.1-2.
- (9) Ou.2: The relevant relationship of the time-space coordinate between relativity and absoluteness of any fixed world point in every inertial frame is all follows:

$$T_A^* \equiv T^* + \frac{V_A}{c^2} X^*; X_A^* \equiv X^*, Y_A^* \equiv Y^*, Z_A^* \equiv Z^*. \left(T_A^*(R^*) \equiv T^*(R^*) + V_A \bullet R^*/c^2; R_A^* \equiv R^* \right).$$

- (10) Ou.3: For the experimental physics, the Lorentz transformation is uniquely the rational correlation equation for the time-space coordinate between different inertial frames.
- (11) Ou.4&8: AY is entirely caused by Ab.1 but not the 'non-inertial effect'.
- (12) Ou.5: Generally is RERMO but not IRPCE the Lorentz effect can infinitely deviate from IRPCE except for those of relative to Σ_0 .
- (13) Ou.6: It is only in one of the two inertial phases at the experiment for AY that the physical clocks intrinsic-real velocity of SC. is surely no-exceed $\sqrt{1-u^2/c^2}$ times to those of Σ_v . As for another, the result can logically be the opposite.
- (14) Ou.7: *The Longevity of High-energy Meson is a verification of the-(1) so a negation but not evidence for SR's relativity-only time-space view.*
- (15) Ou.8: The inertial frames between which the conversion in time-space coordinate has to follow the Lorentz transformation generally are mutually being symmetric-equivalent for the external form only in RERMO but oppositely for the intrinsic-real time-space metric in IRPCE being both asymmetric and non-equivalent.

This is justly the opposite-unity view for physical time-space, an exact reflection of the most fundamental dialectics of nature. Ignoring the absolute aspect brings about SR itself becoming that has lost the essential spirit leaving only

the outer form, so has no other choice but to absurdly ascribe AY to the 'non-inertial effect'. Basing upon the(1) has been thoroughly testified; *daring to squarely face the incapability of that the(1) is quantitatively find-admeasured immediately by kinematics experiments; clarifying accurately and completely the inevitability of that transforming the(1) into itself external form SR for the experimental physics congenitally decided by such an incapability, and of that none of the intrinsic metric of whole universe determined by the(1) would be changed for such a transformation*; can only such a time-space theory rightly solve the essence of AY and exactly agree with the naturally dialectical objective reality of the physical time-space, and this theory can also be treated as the standing alone in no-paradox a special theory of relativity.

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